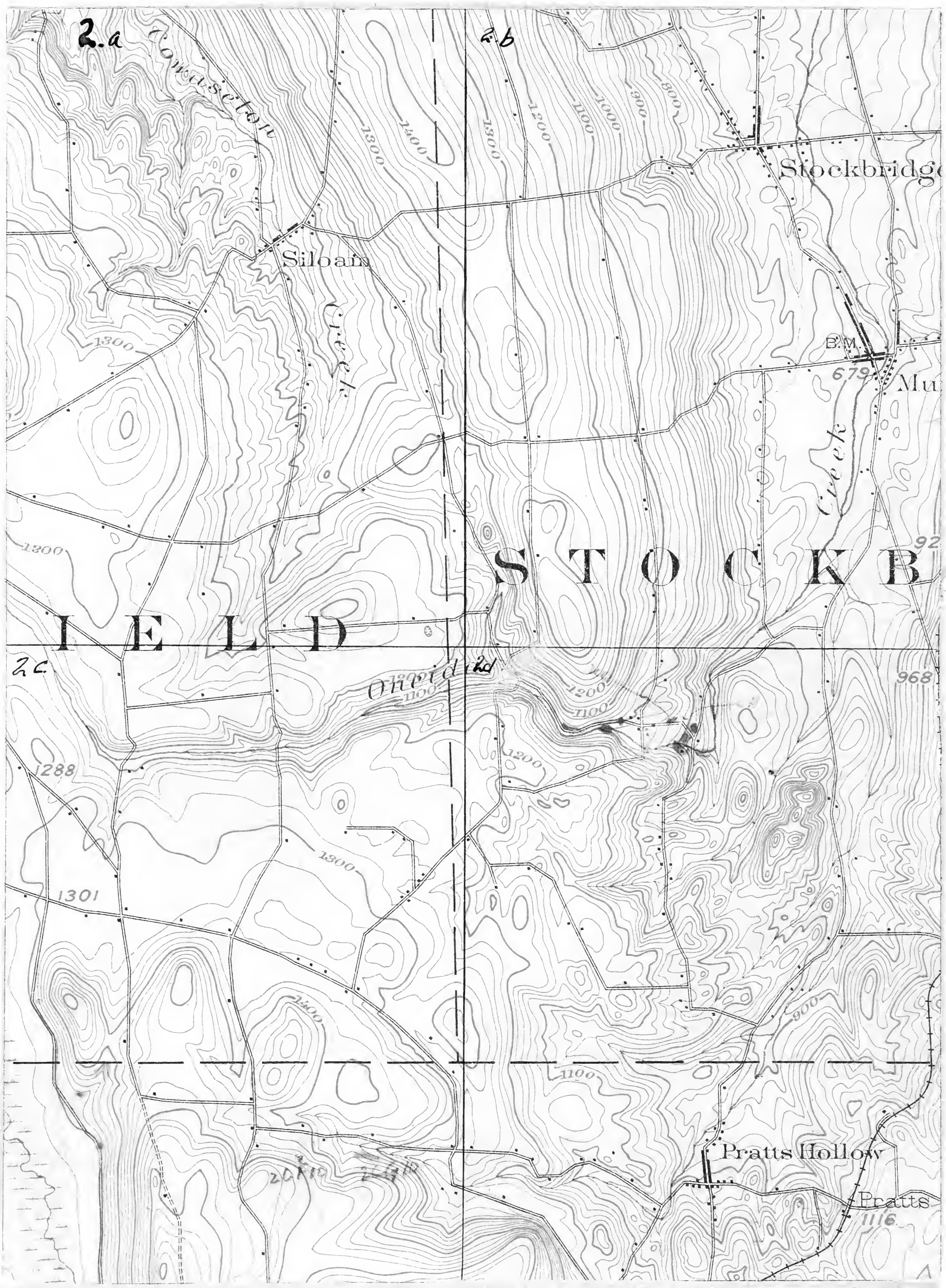
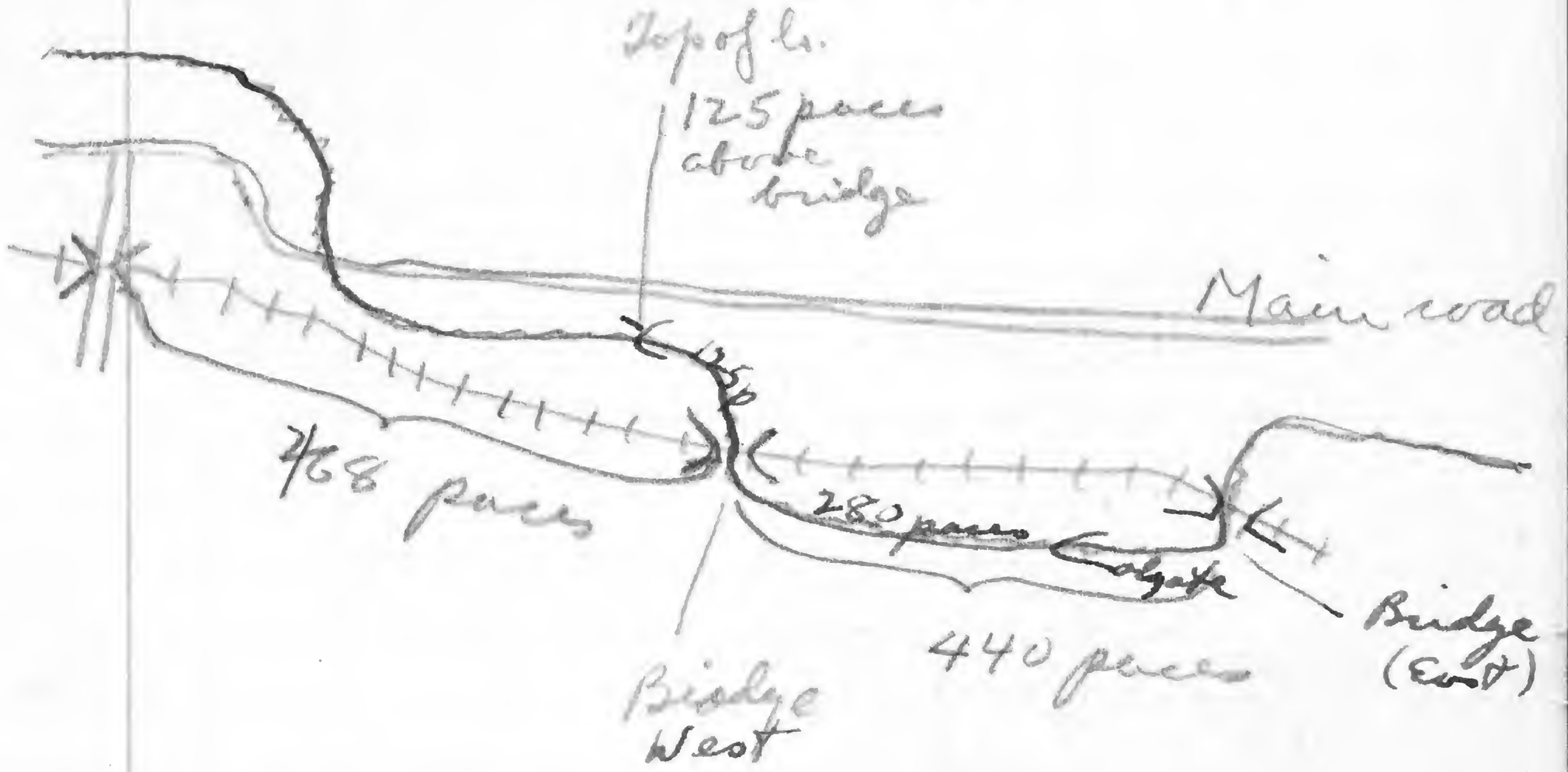

2.a
2.b
2.c
Cowasselon
Siloam
Creek
Stockbridge
B.M.
679
Mu
Creek
968
S T O C K B
I E L D
Oneida
1288
1301
1300
1200
1100
900
800
Pratts Hollow
Pratts
1116

September 3, 1938 ~~127~~ 1000a

Railroad cut & gorge at Earlville



Limestone 2½' thick in three main layers.

Colgate goes under stream level 280 paces down from (West) bridge over stream.
Road to West RR bridge over Creek 468 pa
Paces from bridge to top of Stone Mill — 125 "
R.R. cut ends 320 paces from West Bridge
Limestone first appears in stream 400 paces below West bridge
592 paces to East bridge from West bridge

1001 Aug 31 1001

Oneida Creek.

2dC3 960' Onondaga ls. Light gray on weathered surface dark brown interior. Etched surface where water backed.

Sumbashing gives stone ability of easy fracture on edge at level of rapid considerable flow is noted.

2d.A1 Agoniatites ls.

E. expansus

P. sacculus

Sept. 11.

Quarry just N of Stockbridge Falls.

2dD 2 80' Appearance of heavy-bedded massive limestones which in the bottom layer of 2' are crumbly and of a soft, light grey color becoming darker toward the top.

On this are three feet of blue-grey, fine, even grained limestones

Above this 5' of blue ls. showing fossils corals and Stromatopores and crinoid fragments.

On this are 7' of limestone making a total of 17' for the thickness of the Quarry.

In the middle layers of the quarry considerable crystalline grains are see in the stone. In the top beds much clay has come in in thin layers making well marked bedding planes so that the stone may often be split into thin layers. Small particles of clay locally make a limestone-clay conglomerate. Solution weathering leaves irregular lines of unequal hardness across the blocks marked by pits where the more easily soluble matter lay.

Fossils:-

1003

In general very rare crinoid stem-segments and small fragments of stem predominate with here and there small heads of Favosites and an occasional cup coral. Stromatoporoids are common in two of the beds one 7' up, the other about 10.

Joints: not well marked.

These beds are probably of the waterlime group.

1004

2DD2' across road SE from 2DD2 a large quarry, bottom beds material at about 840'

900' Quarry wall begins
905' Even grained Grey ls. very dark when fresh but weathering to a light grey surface. On surface it is marked by elongate pits where a brown carbonate mat has fallen or been leached out. Fossils are rare or absent in this first five feet from the floor

911' same with few fossils

916' at 1012' considerable brittle shale between the limestone beds.
1014' fossils fairly common but mostly of Stropheodontas
The stone has more crystalline fragments.
922' Stone with large Stropheodontas
It has a fetid or bituminous odor when struck.

927' Stone above this level is dark blue grey, semi-crystalline ls starting with fossils
B. coeymanensis
A. reticularis
Meristellas etc.
about 5' of this fossiliferous stone is revealed.

1005 Sept 11. 1005

Rocks of Waterline division are found below the bridge at Stockbridge falls.

Onondaga is found about 50' below road at 2dC3, and continues up to road

Onondaga - Helderberg contact is between 920 and 946 probably at 935!

Sept 11

2dC2 Onondaga - 1000' representing one of the very topmost beds. It is dark grey in color, much darker than the semi-crystalline beds below.

Onondaga - Marcellus contact in creek is at 995-1000' Probably 1010 ft. 27.

The Agoniatites l. is ~~about 30'~~ 25' above Onondaga.

June 27

At 1020' hard black bituminous Marcellus contact and fossils as
C. Prolifica
S. fecundella

Returned - the bituminous black shale is at black and C. Prolifica with pieces of Pecten [illegible]

1084' the Marcellus in creek [illegible] at 1032' [illegible]

1007

1025-1

Agriculture limit line as at
about 1040-1050 feet on the
of Oneida Creek [illegible]
[illegible]

1008

Aug 31.

2C. B10. 1340' 100 yds by 20' gray arenaceous shales with sponge in fossils, a hard band causes a small cascade. The hardness due probably to increasing silt. Small coral concretions common of the kind that have a yellow brown rind as an axis.

Fauna

L. perplexus.
Nebethera sp.
Bryozoa
P. Alisota commonest form
C. vitulus
Dalmanites sp.
None of these fossils is found in such abundance not even the commonest.

Joints
N 41 E
N 57 W.

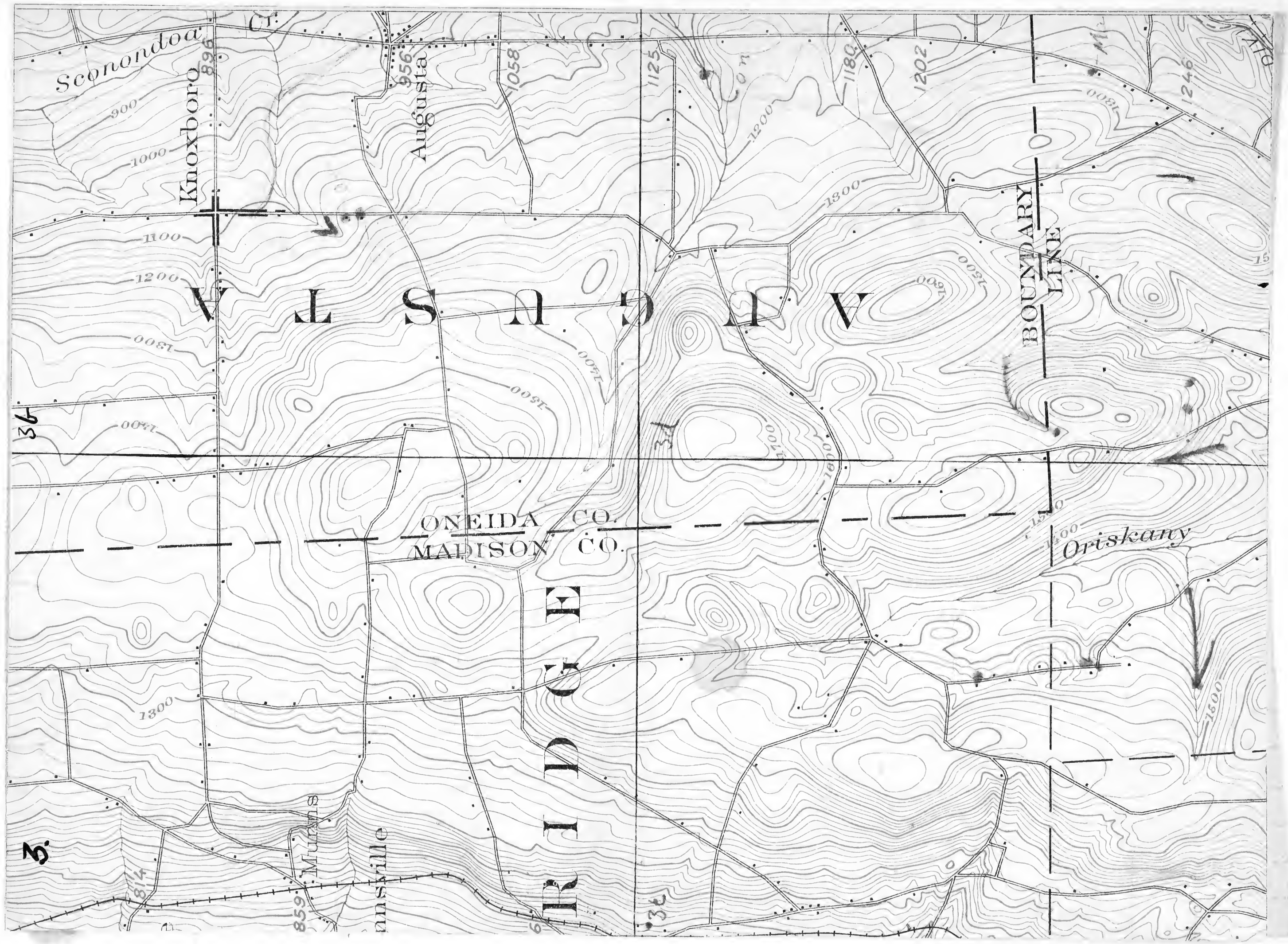
60

1010

1011 1011

2CB8

2CB9 1300' Massive, grey shales breaking into large pieces, very fossiliferous in a few kinds
Large Spirifers
S. pennatus
B. nebrascensis
Productella
S. peoplana
Chonetes sp.
P. lirata
A. umbraculum
P. flabellum
N. oblongatus
C. scitulus
M. concentrica
Correlated with 2C. and 5BC5


Sconondoa Cr.
Knoxboro
Augusta
AUGUSTA
BOUNDARY LINE
ONEIDA CO.
MADISON CO.
Oriskany
Munns
ville
896
956
1058
1125
1180
1202
1246
814
859
900
1000
1100
1200
1300
1400
1500
1600
1700
1800
36
31

3 f E 6. Gray ls. with fetid odor and fracture
Texture very fine, crystal grains of dimorphea and some of manganese carbonate, weathering into large boulders with rounded extremities from solution. Some beds weather on break into irregular slabs.

Fossils.

O. congnomensis
A. retiularia
Favosites
L. rhombidalis

7

The bed between 1138 and 1143' is not very fossiliferous but that between 1145 and 1149 contains O. congnomensis and A. retiularia.
Stone more compact from 1145 to 1149 and contains fewer fossils.

Favosites is common at 1150' in very large heads.

Between 1160 and 1165 stone contains much carbonate? in small masses.

At 1183' limestone with much flint and a fauna predominantly of corals. This ls is lighter of color and very clear grained. The Helderberg ls. below

ceased to outcrop at 1175 1014 since between 1173 and 1183 the Onondaga horizon must come.

F. canadensis in b at 1188'

1200' Onondaga disappears.

This stone doesn't have the fetid odor on fracture of that below. It was tested to contain considerable FeS_2.

1176' Oriskany ss. in places, brownish in color forming a small ridge. It is about 15" thick.

A quarry 10' high in the Helderberg is opposite the Knoxboro cemetery. At about 1265'

Joint systems are not well defined because of solution weathering.

Sept 7. 1015

3bES 1180' Onondaga L.
in road bed Jully,
showing characteristic
development of flint.

1016 Sept 8. 1016

3CF8 1440 Arenaceous shales with S. perplana, H. delanyi, C. mucronatus in road bed and in small gully opposite house.

Solsville

Sept 8.

3CF10 1410' Hadrumaceous sh with P. lirata
P. flabellum
S. oliungensis
S. plotoni
S. perplana

Joints N68E

Solsville

Also outcrops in road at intersection at 1420'

3CG12 1280' Shale soft and black when wet of the same kind as found at 3dA11.

1312' a quarry about 30' high of soft sh. bluff black in color Fossils are rare
N. triquetra c large
M. pygmaea
Leptobyndrus (?)
Lingula sp.
C. Scitulus
O. cf. subulatum
Small concretions, which sometimes contain a shell, are common

1356 These shales are somewhat harder.
Aulopora serpens?

1383 They are hard and calcareous - afer accom.

3CF12 1400' the top of this canyon is met by a very hard ss. forming a ridge around south side of ravine and a cascade at the top.

1018 Sept 8. 1018

3dB11 Large quarry showing joint faces N 25-40 E with a complementary set poorly developed.

The stone is grey or brownish weathered aquatecond. ok. with sparse fauna. The stone must be slightly calcareous to judge by pits by its surface. 18' deep. This stone is also observed in the stream bed where it causes falls by virtue of its hardness.

About 20' above the concrete are found the dark shales of the Perlasport type with Gastropod casts, Rhizopodium etc. Two segments of a large coiled cephalopod were also found in these.

Outcrop of same also observed on east hill.

Boulders of Beechland Quarry ss. were found every where in fields showing the Sh-Tudorville Conglomerate to be on higher hills.

1019 1019

Sept. 8.

3dA11. Soft blocky shale, crumbling in thin slabs to longer conchoidal slabs. Has the appearance of the Rockport shale. Very respt. fossils are rare.

Leonaspis sp. ?
N. triplicata
O. affinis
P. fragilis
M. pygmaea

48' above first exposure of blue shale is a falls of about 50' exposing the section. 65' above starting place shales are slightly silty showing a change in lithology.

85' above origin shales are hard, arenaceous with large Spirifers, S. perplana, P. flabella

First outcrops at 1297'. Hard sandy layers at 1390-1400. The sandy band is about 15-20' thick and causes the flat between the hills.

20

1020 Sept 7. 1020

3d H2 1st step. Grey ls. with flint - Onondaga

Blattnoplyllum decorticatum
This occurs at about 1115' & 6' thick where best exposed but intermittent outcrops are seen several times in the brook. The true thickness could not be recorded. Onondaga boulders are common for fully 100' above the first outcrop.

3b H7. Stream at August a shows no exposure of bed rock.

1021 Sept. 7. 1021

3d. H9:

Fissile shales, black when wet, bluish-black when dry and on fresh surface. Weathers to small chips of an olive color.

No fossils.

These are Marcellus or Cardiff. Large slabs fracture with a curved surface, especially when wet.

3d d4 Stream here followed nearly to source but no outcrops seen. However in the flat at road and for 10 "steps" above Onondaga boulders with flint were noted

At 14 "steps" dark b. boulders were noted probably Agoniatites b.

Sept 7.

3d F 11. 3-0-75 ydo by 10' vertical of grey arenaceous shale in appearance not unlike that of Rondout shale of New York but having less fossils:-

P. flabellum c
C. mucronatus
P. lirata
Zygoneura sp.
Lunae spinifera
M. concentrica
S. angulatus
S. perplana
Leptaena sp.
H. delaayi

Bolsville

Joints:- well developed N 28 E.
Less " " N 60 W.

Elevation about 1440'

This stone carries a flat at about 1460'

This is correlated with the arenaceous stone below the Rockport slab on which they rest.

1023 Sept. 10. 1023

3CA2

992' 6 steps above road, first outcropping of Onondaga in stream-bed.

1015' 11 steps the exposure is continuous.

1025' 12 steps a one foot layer of dark flint.

1047' 16 steps Onondaga bedrock disappears

1200' 44 steps to 46 steps gravel and muck in stream bed is jet black, with many Marcellus sil. pebbles.

Sept 8.

3d b 8 1555' Redwood shale in a jumbled mass of blocks, may be out of place?

7th step shales of the same kind as at 3d A 11 1297'. No fossils.

11 steps - 3 :- bottom of large cascade showing soft dark shales.

12 steps Leiorhynchus
M. Byronia
O. cf. subalatum

13 Shales harder, coarser & not split in flat slabs. Leiorhynchus very large.

15. Shale dark & fissured
M. alternatus

17-18 Shale becoming silty

21 M. Zekagi

1504' Top of falls at 25th step
The fall is 72' high. M. Zekagi are found at top of falls, as are Paracyclas (?) niagarensis.

Joints at top of falls
N 40 E for best developed set. Complementary set causes the formation of rectangular blocks. The rock is of fairly a flat nature.

1420
1275
145

167
12
1412

1025

Between steps 1 & 2 above falls
Pechoport shales are found in
the marine and these continue
to its source.
On these about 30 above falls
fossils are quite numerous
notably

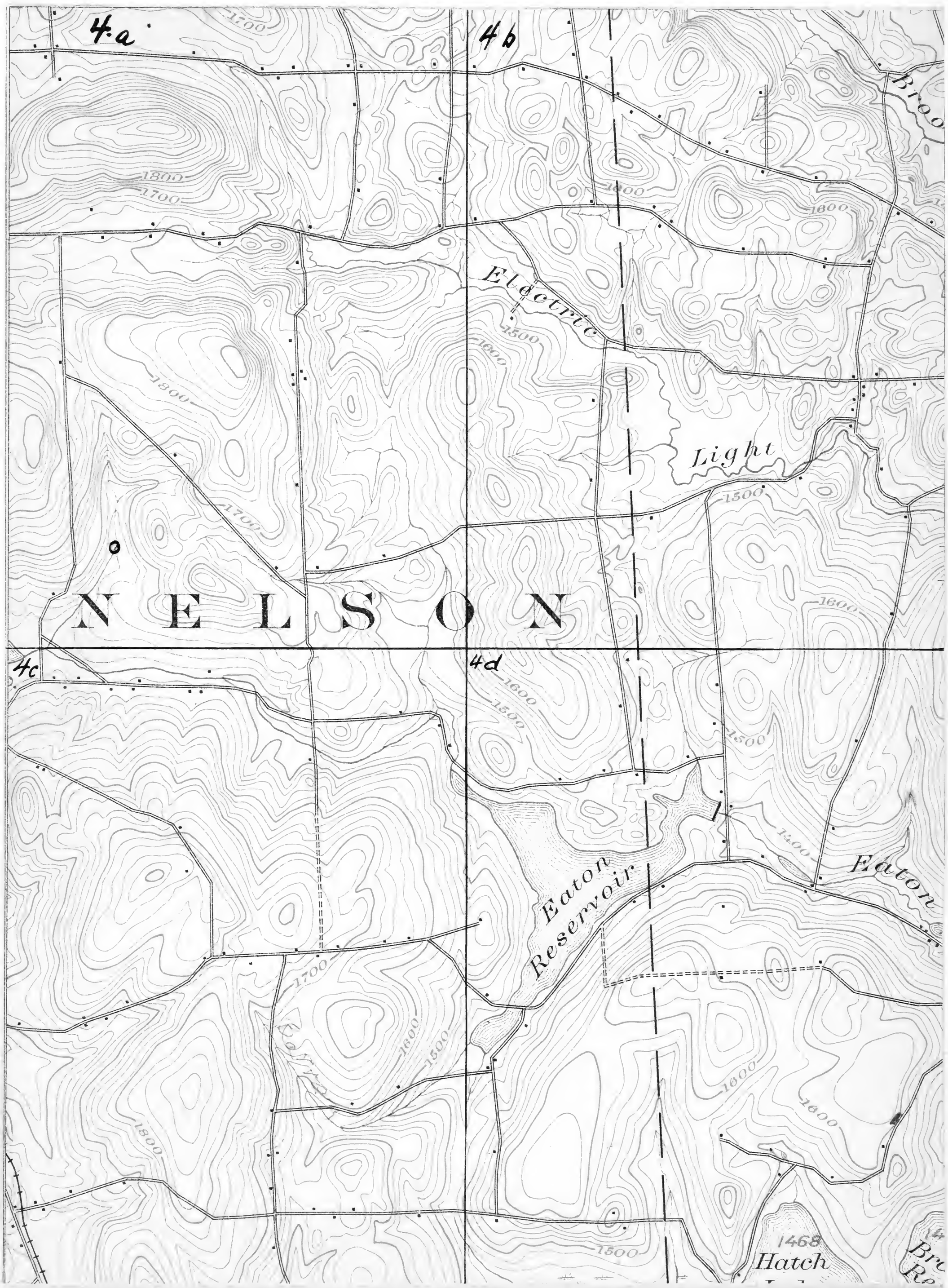
S. permatus well
ornament with well extended
wings but blunt points.
A. lumbonata
N. randolphi
Leiopteria costa

Calcareous concretions generally
have good specimens of
Chonetes and Productella
S. delphicola
M. concentrica

10 steps above falls a hardening
of the beds by calcareous stone
has produced a flat.
Fossils in the calcareous stone
Acrospirifer bulbosus.
A. lumbonata
Productella sp.
M. concentrica
S. permatus
P. flabellum

The lime ledge only
a foot or so thick and
ob it rests on.

1026


4a
4b
4c
4d
NELSON
Electric
Light
Eaton
Reservoir
Eaton
Hatch
1468
1800
1700
1600
1500
1400

1027 July 25 1027

4a B 8, 9, 10, 11 Hamilton (excellent specimens.)

Sept 3.

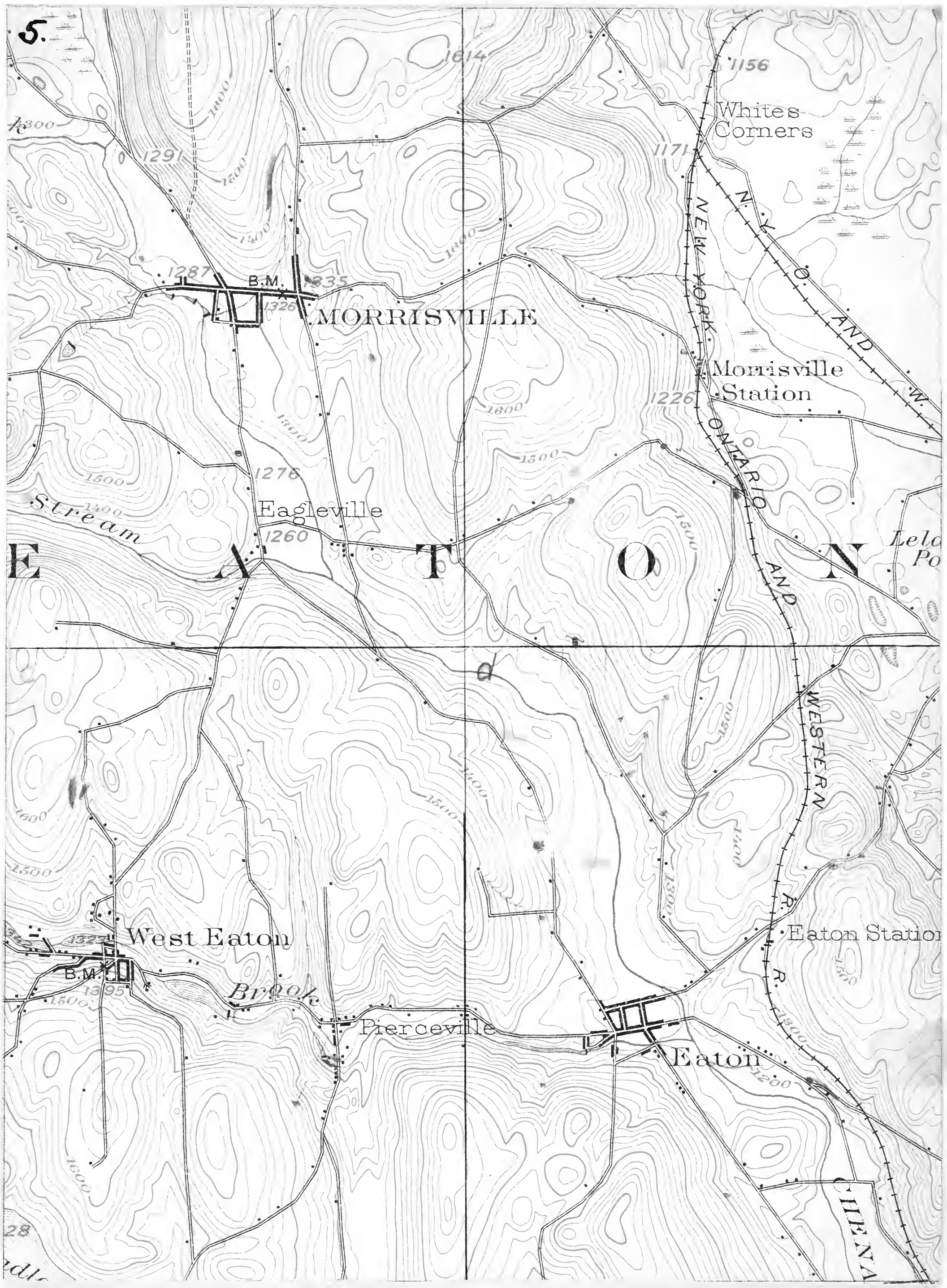
1028

4d 4' very arenaceous shales or sandstones with many Cyrtotechinas
S. cuneata
P. constricta.
T. carinatus
Small Spirifers probably tullius

Sept. 5.

Ravine first West of West Eaton
Sh in brook about 2' vertical
at about 1460-1480.

1029


5.
1614
1156
Whites Corners
1171
N. Y. O. AND W.
NEW YORK ONTARIO AND WESTERN R. R.
1291
1800
1600
1400
1287
B.M.
1335
1326
MORRISVILLE
Morrisville Station
1226
1276
Eagleville
1260
Stream
E A T O N
West Eaton
B.M.
1395
Brook
Pierceville
Eaton
Eaton Station
CHENA

1030

5d E10

1031

[illegible]

[illegible]

[illegible]

1032

5a E 9. 1260'

[illegible]

1033

Plate 66

N 4

5d H3. 1034 Aug 30. 1034

1260' 4 steps above road on road at intersection. 2' bed of limestone with abundant Calcareoteochia and Spirifer as seen at Burchard's quarry. Form a ledge in topography here and behind Ashburn.

1278' Blue shales crumbling in irregular masses exposed for about 20 vertical. See thesis for fauna. 15.

Joints:-
One set N39E 90° is locally closely spaced.
Another set N29W 74° E is very irregular in spacing and along the plane.

1195' same in 15' exposure along the road.
Joints
N37E 90° } Best developed
N39E 90° } set
The plane of another steeply dipping set is very irregular
Atrypa reticularis } common
Actinopterna }
Also B. alternogyrata.

1035

Aug 30.

5d 84

1340 — 1350

3 or 4' vertical of sandy shales with large fossils as

A. principis

M. mytiloides

L. obsoleta etc.

Belongs to new Lyon horizon.

This stone marks a flat depression in stream bed.

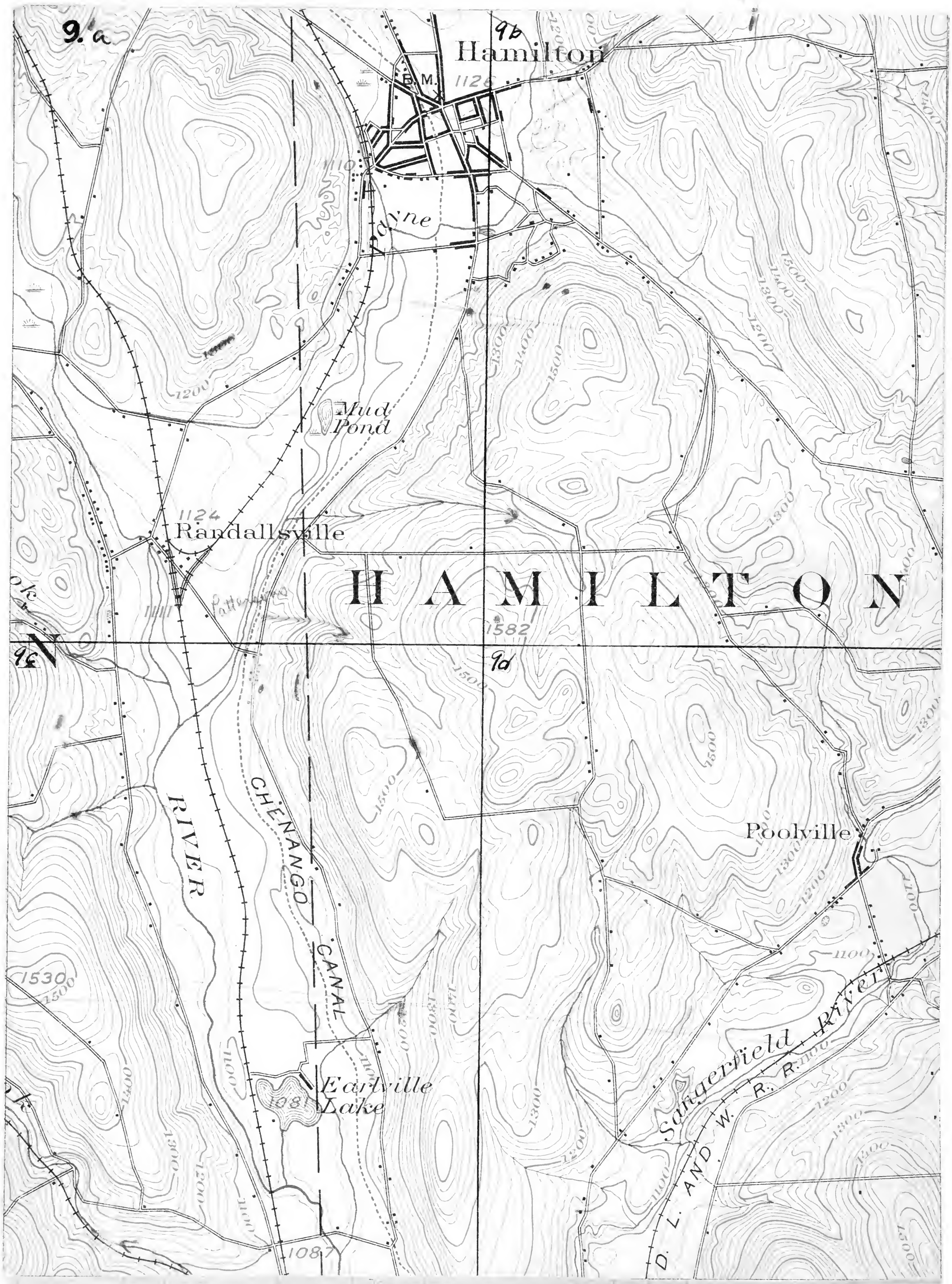
The upper 7 feet is of hard sandy calcareous stone which has MF badly fractured.

Aug 30

1036 1036

5d 84'

Shales of 1.10' formation
1400' Very soft dark fossile
shales. Much jointed by
regular sets are hard to
distinguish
Fossils - see Trees.
Outcrop 8-10' high.

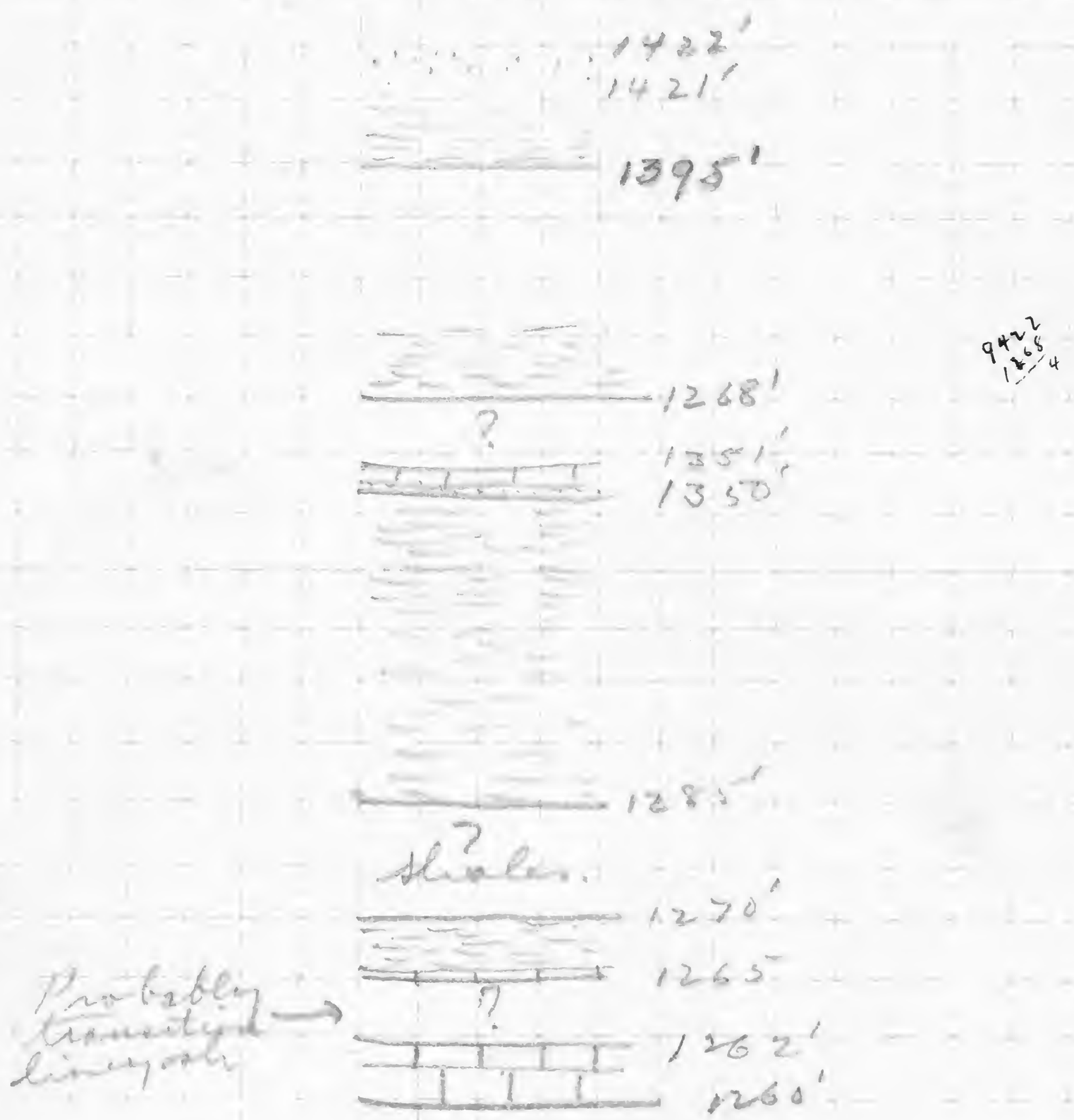

9a
9b
9c
9d
Hamilton
B. M.
1126
1110
Payne
Mud Pond
1124
Randallsville
HAMILTON
1582
RIVER
CHENANGO
CANAL
1530
Earlville Lake
1081
1087
Poolville
Sangerfield River
D. L. AND W. R. R.
1100
1200
1300
1400
1500

5dD3. 1037 Aug 30. 1037

1310' a foot or two of grayish shale

1322' gray sandy shale with abundance of fossils
L. macropterus
P. flabellum cc
N. argenta cc
Camarotoechia sp. nepalensis
A. princeps
A. boydi
M. mytiloides
S. truncata.

These shales are also found a 10 feet higher up where they make compact probably formed from calcareous and representing the top of the horizon.
represents new Dyer horizon.



Section at Dadds ravine

Aug 30

5d C2. Ravine opposite H. Dodd's bungalow
1260' hard calcareous shale
with S. granulosus.
T. carinatus
About 2' vertical.

Next

X On this at 1265' rest crumbly blue shales teeming with small fossils as
Small Lenticulites
Phalidopsis hamilton[illegible]
which sets this as horizon marker between Ludlowville and Skaneateles. Small clay concretions are noted.

Ex Delphi Ludlowville

1350' Top of falls which is fully 65' in height exposing the whole section of Eatons farm from base to top of Hamilton layer. Delphi
No. 135 1265/85
At top of falls some shaly layers were noted. Above falls valley flattens because of hard layers. Joint N34E 70°.
Our stream bed immediately on top of some shaly layers which are flat, are limestone 6" thick composed mostly of fossils of which Atrypa reticularis is most abundant and Leptaena rhomboidalis is common.

3
1268 - dark sh. splitting at this place in oval plates. Few fossils.
Leptaena sp.

1039 1039

422' A large section of shale is revealed at about 1395', much moss covered but still a bluish shale which seems to become harder as the cascade is mounted. At 1417' it is slabby but contains considerable agillaceous matter. At 1422 a hard layer of rock is found, blue-grey, hard, the cause of the cascade, and here again the marine flutters down.

This rock may belong to the U. Quarry.

A small drift block on the stream has: S. permatites
C. scitulus
R. ambronota

It is probably from a ledge such as that just at first falls in ravine at Dunster's.

Qrg 30.

5d C2' 1360' Red Sym shales.

1040 Aug 30. 1040

5-6 B12. 1330' shales of (Is Eaton) with numerous B. subcomplanata lining the ravine to 1355' where they have hardly forming a falls. & peplopha was noted at this level.

Joints N 36 E 90°

1041 Aug 30 1041

5a 27. Morrisville

1380' 5' vertical New Gym horizon Guy blue shale. Numerous large fossils. Joints N 35 E 90°.

15
1406' The top horizon of hard calcareous stone is reached.

1460' blue black shales giving way to so.
1470' sandy-stone slab in stream bed, hard band causing a flat in the bed, probably represent a local hardening in the black shales.
Nucula corbuliformis } noted
small Spirifer } noted
in the dark shale.

as slabs with Scaumarks of the kind found in the U. Quarry everywhere over the sloped at this level indicating that this horizon is near by.

1042 Aug 30. 1042

56 B 10. 1415' Sandstones exposed for 30 yds by 4'. Grey silt breaking in large flat slabs or slabs with a crudely subconchoidal surface. 10' below these are arenaceous shales splitting into very thin layers.

The ss. are not very fossiliferous but bear

P. flabellum cc.
N. angusta cc.
P. cadmatus
Camptochia sp.

Some weathered slabs composed entirely of fossil coats suggest bits of lenses. This exposure is referred to the ~~Pennsylvania~~ Jonics Top of Delphi
N 33 E 90°.

1043 1043

5bD9 Aug 30

On road at 1360' level. Hard compact shales with Cardiocrinus
H. delanji
P. blairi
Probable → Rent Gym.

5bE9. Exposure of soft crumbly shales with abundant small fossils
Rhoidops
N. obliquatus 1300'
C. bottii
G. constricta
These are the soft shales that lie on the Burlington ledge.
About 8' below this in the road about a foot of this is exposed. 1290'

5bE9' Along R.R. at 1260' large exposure of soft grey shales weathering to small fragments
Fauna
C. selgenus
L. latus
A. umbonata
These belong to the upper limits of the Pecksport shales.

Aug 30.

1044

5 to D9' 1312' Mottville & Quincy Co.

5b cy. 1045 Aug 31 1045

16½ stp. Soft gray-blue shale with considerable weathering. Weathers to brown irregular pieces. Surface is irregular from weathering of shinks, blackened appearance.

Fossils - moderately abundant

✓ C. mucronatus
✓ T. cairnsi - small
Gramnogaia sp.
P. rara
L. hamiltonae
✓ S. papilosus
✓ C. rhombifera cc.
✓ P. flabellum
✓ Aviculopecten sp.
✓ S. pennatus
✓ Lage Spirifer
✓ C. latiguum.

Fossils are well shown

N 89 W (?) only seen once in stream-bed.

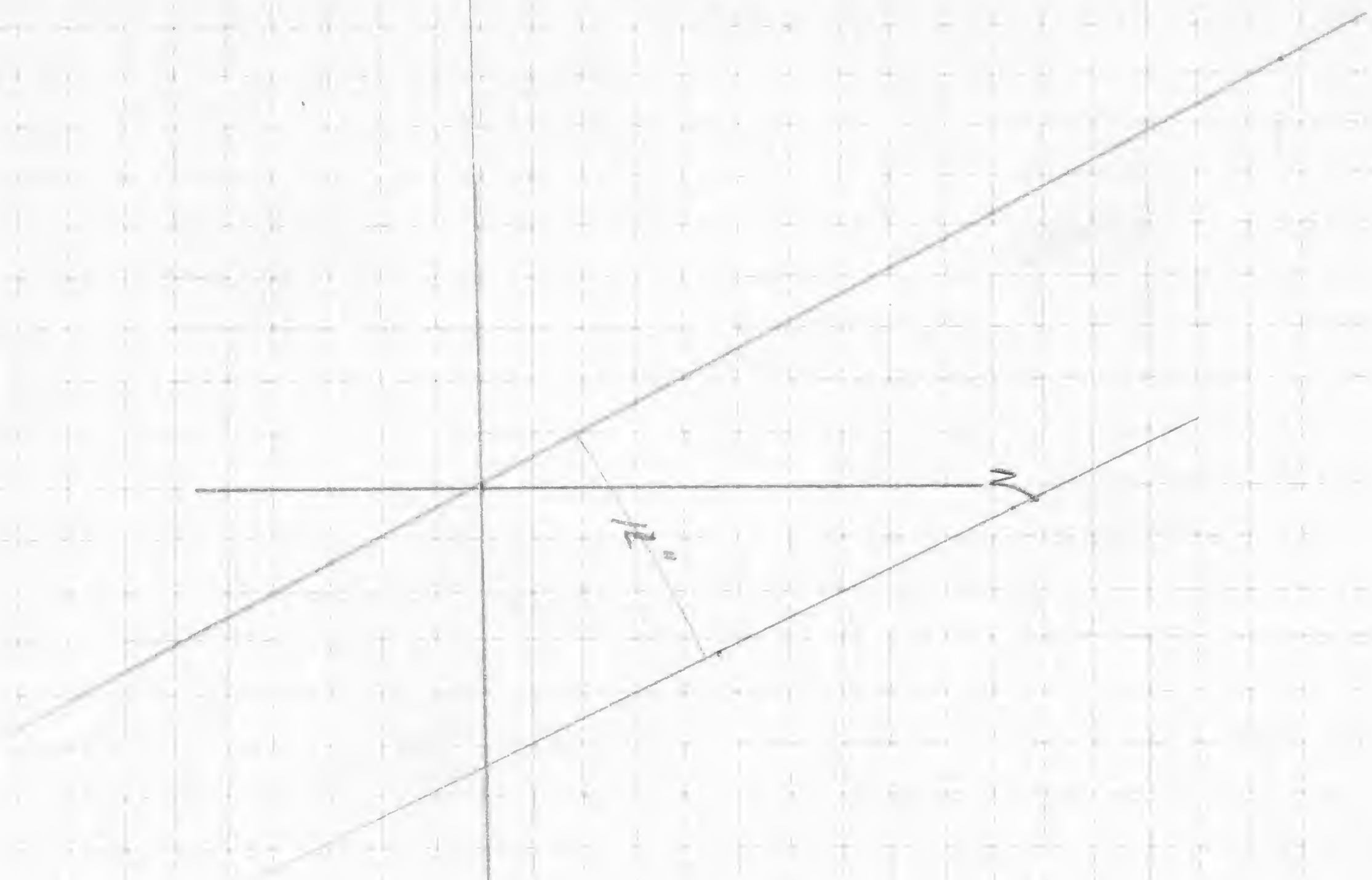
N 27½ W spaced in stream 9" to a foot

These are exposed for 15' in 19 steps in a node.

130 8' shale is fissile splitting in thin-flat chips of a black color.

Leiorhynchus cc.
P. fragilis c
A. rhomata

The shale is soft it can be crumbled to clay in the hand


z
$\frac{\pi}{2}$

Aug 31.

1046

5 6 B1

1230' soft gray shale with few fossils
Leiolepedus
Lonsdaleia
Orthoceras
Possibly Peckaport horizon.

Sept 3

1047

5C 1560 - 1580' West Eaton
Avonacanus shales with a
bed of flaggy ss breaking into
thin 1" slabs. A short search
revealed only
Camarotoechia sp.
Crinoid stem segments.
H. delanjo in debris

5dA4 1290' Near top of New Lyme
horizon as shown by large
Tindyteria obsoleta, big Spirifers
+ Athyris ovata.

5dF8 Road intersection
1215' shales of Eaton 1's Type
in a ten foot exposure. Talus
seen below RR tracks.

38

Aug 31

1048

5aF5 Morrisville
1330'
Quarry 50 yds by 25' including shales of New Hyde above and Hyde at surface
Complete Cyphaeus found here
Joints N 18½ E 90°.

5aE3+4 Top of New Hyde horizon.

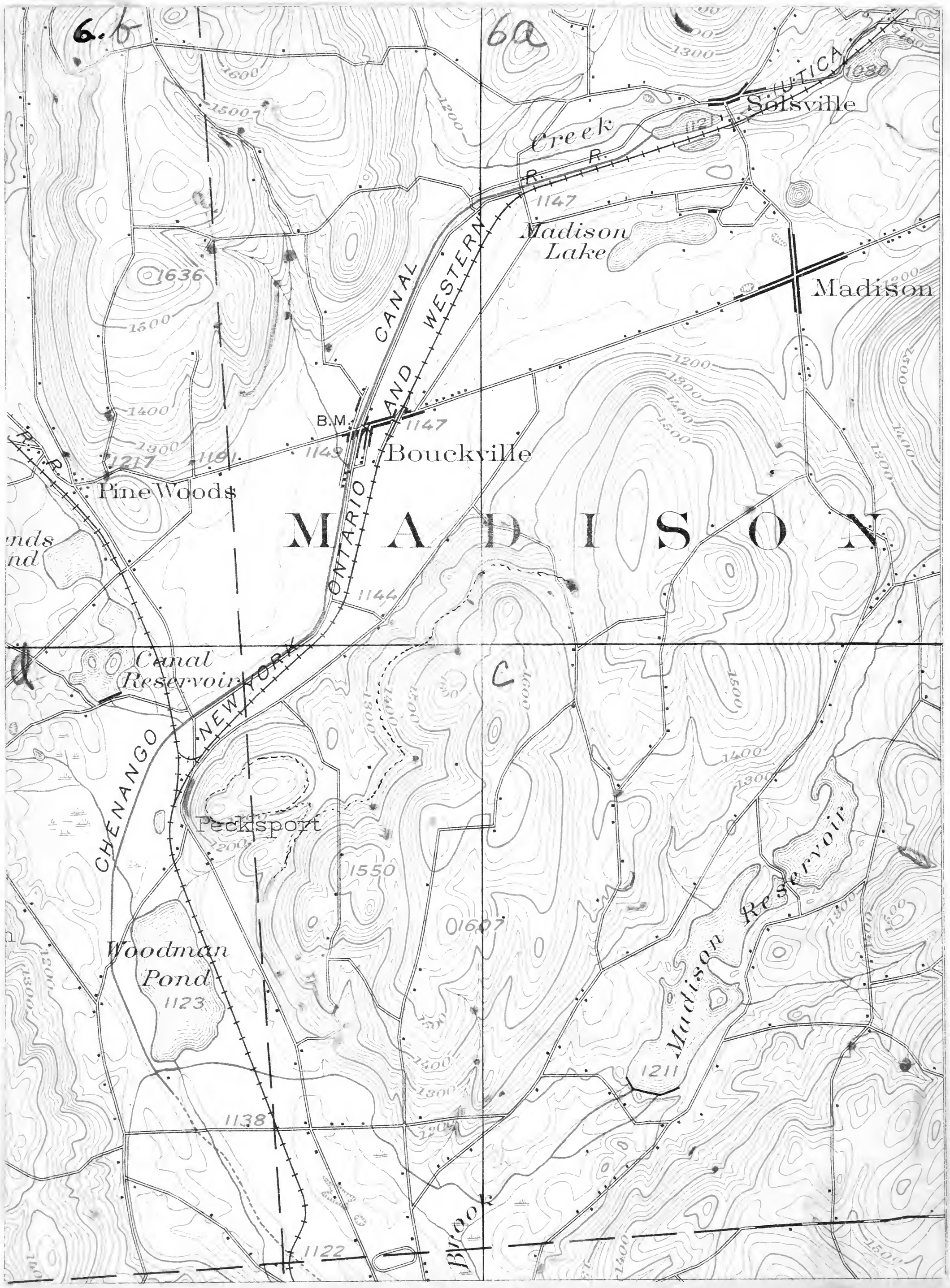
52

Sept 3.

5 d A8

1300' - gray soft weathered shales with thin ss. becoming compact in a 26' cascade at the top of which the stone lies composed of hard sand stone with lime lenses. E. lucklaeni was found here establishing the 8 @ a horizon. Top at 1330!

Above this are dark shales very soft and fissile.


6.b
6a
UTICA
Solsville
Creek
Madison Lake
Madison
CANAL
ONTARIO AND WESTERN
B.M.
Bouckville
Pine Woods
MADISON
Canal Reservoir
NEW YORK
CHENANGO
Peckspport
Woodman Pond
Madison Reservoir
Brook
C

Rig 11.

6a B11 1205'

35 sp

Rechecked to 1380'-1400'.

54

Aug 12. 1053

6AF9 Outcrop 25' vertical, a short distance up the ravine

Color - black
Texture - very fine - composed of a fine black clay
Weathering - into very thin chips which are small and irregular

Behavior - well consolidated when not exposed to the weather

Fossils :- very sparse
A. umbrosa cc
L. laura (round & small)
C. exitilis

Aug 18

6a B11 Limy band reached to 1400' 575 paces below road intersection at 6a B12 and 16 steps below the camp.

Aug 18.

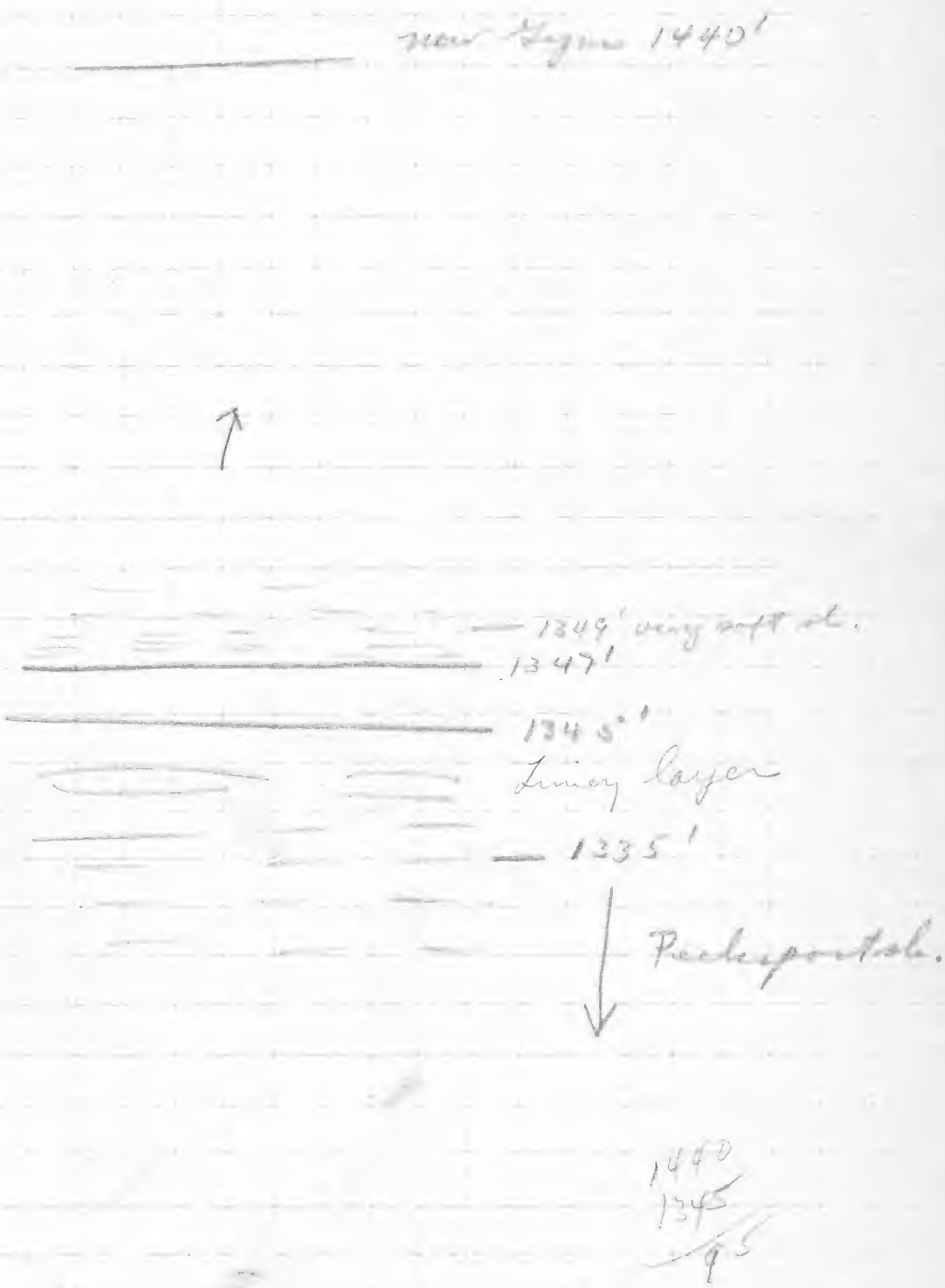
6a F10. 10' hard calcareous sandy shale representing top of New Glynn horizon
N. angula
Actinoplana sp.
Clay tubes and pitted surface weathering

Aug 18.

6a F9 1230' – 1335' soft dark Pulaski shales with few fossils. At 1335 P. flabellum was noted show influx of large animals. 1340' hard layers of calcareous sandstone rock. Near 1338 a bed of pure arenaceous limestone was noted

1345 transition from calcareous rock to soft shale as a calcareous argillaceous rock with Spirifer and Camarotoechia. Pleiotrophis joints spaced about 30 cm apart
Strike N 33 E
N 31 E

A head of F. hamilton in the compact bed is 1" in diameter.


1440'
1349' very soft at.
1347'
1345'
Limey layer
1335'
Peebles portal.
1440
1345
95

1055

Fossils from shale on hard band at 1345'

M. dekayi
L. ampla
P. flabella
G. truncata
C. congeta
M. corpulica
T. cornutus

The shales immediately on the hard band with rocksite gives way to very fine shales with Ostracods

Eaton shales run up to about 1395' and blend into New Scotland horizon

Sept 10.

1056

6b B8 1390' Peckaport sh.

C. scitulus
Joints N 86 E.
Blocks are opposed vertically
for 30 or 40' in and along
the road.

6b B9 1250' Peckaport sh. in
road opposite first house
from State highway

60

Sept. 10. 1057

Pine Woods.

6 to 8 q:- 1205' at road intersection hard shales, grey in color with many Tadnuus. Forty feet below these on road toward Morrisville the shales are blue and quite soft, becoming harder as progress is made east toward road intersection above.

Solsville 85

Large spirifers and rounded concretions are common in the harder beds.

Joints N 56 E 90°
N 37 E 90°+
N 36 E 90°+
N 41 E

A complementary set to N 35-40 E is less well developed.

Sept. 10. 1058

6bD9 Grey arenaceous shale with
P. biata
C. mucronatus
at 1220'

Sept 10.

6bE8 1245' Hard, grey Solsville
arenaceous sh. with Zaonuus.

1255' 15' exposure of ~~Pecksport~~ Reckesport
shales, crumbling to shell
fragments.

6bD6. 1408' ~~S.K.~~ Hodgeville ~~Lud.~~ boundary stone
forms a flat on the ravine
and springs gush from above
it.

The hard Solsville shale forms
a conspicuous ridge and
around hill facing Bowersville
rising from 1256' to 1277'

1408
1256
152
16

56

Sept 10. 1059

6 b B 9 12' feet soft shale, olive in color where exposed

N. trigonata
N. oblongatus
Orbiculoidea
Aulopora

Probably Cardiff in age

54

Sept. 10.

1060

6bA2 1268'- foot of cascade showing ammonoids shale.
P. lirata is common at this level.

1301' Top of cascade of lower ammonoids sh. On bluer next backspent shales. The cascade is 33' high and is practically of the same kind of stone throughout.

6bB2 1442' hard calcareous ls of Rowland Quarry & Payne St. Rock of Eaton (1b) bed is exposed for 40' above this second falls. Two corals (cup) were found in the soft shale 21' (vertical) above the falls.

1061

Lepr. 8

Folsville 1410'

6a d1 Grey arenaceous shales (silts) with few fossils which are correlated with the arenaceous shales below Bishopport bridge on road at Monsville and at 3d F11.

The exposure is fully 100 yds forming a conspicuous ridge on the side hill

Joints N 25 E
N 30 E
N 27 E

With a complementary set poorly developed enabling large rectangular blocks to split off

Fossils:-
L. crotalum
L. nuntius
Leptaena sp.
P. lineata
P. flabellum (unusual ornament)
A. principes
C. mucronatus
Cornularia sp.
M. concentrica.

Sept 8

1062

6a B2. 1200'

Dark, blackish blue fissile shale crumbling to thin fragments, 25-30' vertically.
Often weathers with a red rust.
Leioilynchus (large) only fossil noted. Place may be Cardiff.

Sept 10. 1063

6bF7 Soft, dark crumbly shales, probably Cardiff.

6bF6 Same.

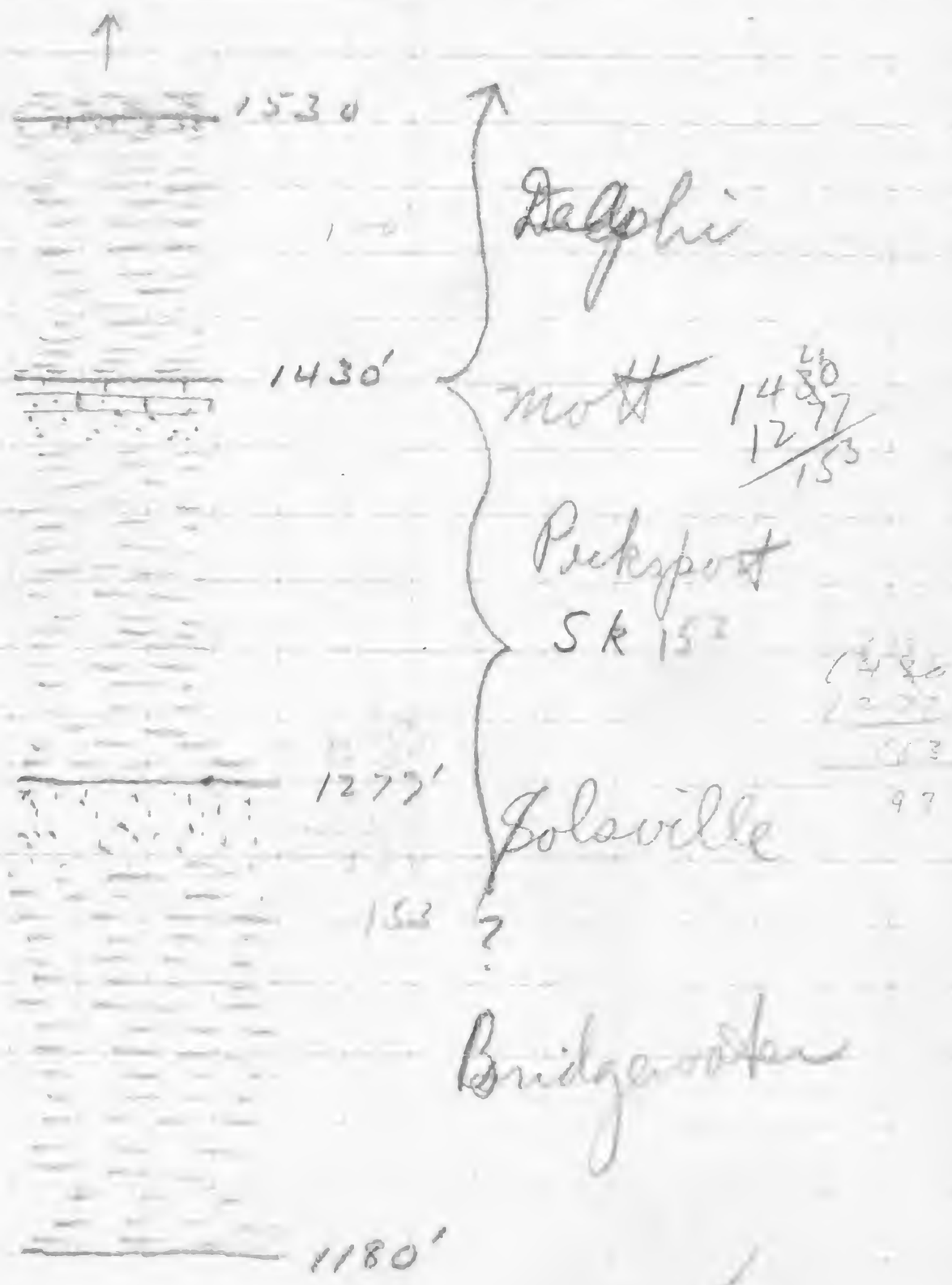
6bF5 1277' Hard band of calcareous (?) sandy shale with Jaomnus and very large Spirifers which correlates with those at Lebanon

1295' Redsport sh. with L. lamellosa small outcrop in stream-bed

6bE3 In a side ravine crossing the road at 1408' the ~~brown~~ Mottville red shale is found at 1430'. Above 1430' are found shales of the Eaton's type

6bE2 till at about 1530' the top of New Hyde horizon is seen. Soft sh. on the New Hyde shale are much weathered and their true thickness could not be determined.

This horizon (Sk-Lud) is also found in the main stream at the same level 1430'.


1530
Delphi
1430'
Mott
1277
153
Pickspott
SK 153
1277'
Jolaville
153
?
Bridgewater
1180'

6bE6 Sept 10.

Soft sh. grading into hard sandy sh. at 1275' forming a flat in running. Same other as that on ridges at Solaville.

1302' small exposure of Peckaport shale.

1319' small exposure of Peckaport sh. with L. laura (very large) and. B. subconjuncta
N. oblongatus.
A. undata.

At 1430 stream passes under short road leading to farmhouse Lud. Sh. contact should appear here but none was definitely seen. However drift boulders of this stone are common here. A few large pieces may be bed-rock but it is difficult to make sure.

Q. 1a.

Chinden Glen.

6d 87:— 1220' [illegible]

6d E7. 1220' Same bed as at Chinden Glen, for fauna see Thesis.

Transitional from this calcareo arenaceous stone in a soft shale bearing a fauna of small animals with many Ostracods. This fauna becomes larger and gives the Eaton 1a shales as the stone becomes more arenaceous.

Stone below the falls has few fossils and is hard and sandy so that at 6d 89.

The soft shale with Rhoidops is 5' above the falls.

1236' shale of 1a (Eaton) is well established. Rhoidops is abundant when the shales have become bluer and more compact.

1263 the Dolphin fauna and shales are marked by many gastropods and also by the advent of large Pelecypods showing the turning the oyster

83

upper classes below

210
BH
12/1
86

New Lyme formation
joints at this level N 34½E
M. subalata is common here.

at 1274' a calcareous
band of small thickness forms
a cascade. It is probably
only a local thickening of the
bed.

1280' shales are hard with
G. linearis, P. liriata etc
showing the soft blue shale
bed of the New Lyme Group.

1296' these rocks have become
rather sandy and at
1311' the hard bed capping
the New Lyme formation
forms a cascade and
here the ravine opens
to form a flat area for
about 50 yds. due without
doubt to this more
resistant band.
L. macrostoma is noted at
1313' and here the strata
has the peculiar elongate
tubes in it.
L. perplexus in debris
although other beds in
hard calcareous stone
underlies the top of the
New Lyme horizon.

1334' blue black shales
with very few fossils. See
therein for list. Joint N 48 E
These continue up ravine
about 20' with steadily rising
ravine comes to an end.

Level of about 1300 of hill between Chase's Hill and Upper Chase's Mill is crossed with outcrops showing large Pelecypoda and many Trilobite fragments, also and the top of the Mill Gym Lead Series forms an indented Terrace.

1363'

1355'

?

1311'

?

Burdiards

1273'

?

1241

soft shale

coral bed

1231'

1227'

1'

sandy band with traces of Crinoid spines

Blue band

1212'

Aug. 16.

6 dE 6:- Brookards Quarry
1212' bottom of Quarry. Fifteen
feet from bottom to 1225' Cores
are taken up by coarse
alternations of hard stone
and land shales at 1224' of
dark colored coarse crystals of
quartz lipid Carnatites Dim
and Spirifer andacutus. 1222-
1227' is taken up with land
calcareous sandy shale with
blue shale stringers and
pockets which have light
minerals. On this shale
are about 3-4' of calcareous
shales appearing at bottom
land with calcareous
shales and decreasing lime
giving way to soft brown
shales with small fossils.
The land band is characterized
by large fossils. The top of
the bed of hard land shale
at Brooks with the shale
occurs the corals.

Above 6 dE 6 at 1273' grey
shales with large Pelecypods
and abundance of Bandheria
These are the shales found
at or about the 2nd footer
Pope St. where C. terrens
is common

1311' hard 20. layers of 6" on
top with conglomerate as below
with large Spirifers and
Rhynchonella appears to be
top of shales.

Delphi

6d F6

1355 8' shale, very fine-
weathering, very faulty
appearance
Fragile ? no the
only fossil noted.

1069

Rock appears at 1311 in
top of hill. Hard layers
at 1355 from brow of hill

Joints at Bunchinski

N 30½ E
N 39 E } best defined

N 52 W less readily defined
occasionally well developed

Aug 17. 1070

6d 25.- Near Benchmark found at about 400 yds N 29 W at level of 1255' and forming a terrace on the hillside, hard calcareous layer found at 6dE6 at 1254'

at 1293'-1300 shales of Eaton 10. form another terrace.

Aug 17. 1671

6dD3. Peckaport Railroad crossing
Soft shale etc. (see there)

Jointing

Extent - thin whole outcrop
Spacing - irregular 8-10 or ten feet.
Trend main set almost
perpendicular N40E.
All other sets have curved
planes or are poorly defined
One set N63W dips 78° S.
N57W 78° N or the
exact reverse dip in the
other case
N57W 83°S
These latter sets are not
important for they are not
continuously or regularly
developed.

82

1072

Aug 17

6dD30 Small exposure hard calcareous-dunaceous shale the same as found at 6dE6. The exposure is very small this rock here forms a terrace on the hill.

80

Aug 17.

1073

6dG4:- Black shales in stream bed, much weathered to grey rock B. lirata in hard sandy rock forming a cascade in the brook.

At about 1460' a hard bed is in the bed of the brook, it is grey, a manganese with Hoskinia and forms the flat between the hills

His rocks lie on the New Ryan beds found below

The 1st and 2nd layer is approached by an increasing sand content in the rock with corresponding hardness of the stone, forming the whole flat lying between the ridges.

At 1360' in this ravine comes hard sandy stone in regular of fractures. May belong to New Ryan horizon.

Aug 18.

6d H2. Below 1300' in stream bed are noted many rectangular boulders of stone referred to the calcareous rock of Byrchard's Quarry. The flat in 6d F3 and its continuation in 6d G3 is composed of this hard rock without doubt.

1380' a small falls in stream is referred to top of 7 Delphi Horizon and here is exposed for 8 or 10 feet. At two, forms a small flat.

Aug 14.

1075

6d 89:- Blocky shales, much weathered appearance of fossils. At the upper layers near the falls they are compact splitting into very large layers, and very resistant to a blow of the hammer.

A. ambrosia is a very abundant fossil but it is characterized by its small size, most of them being only ⅛" in width. A large ambil referred to E. angulata was seen once.

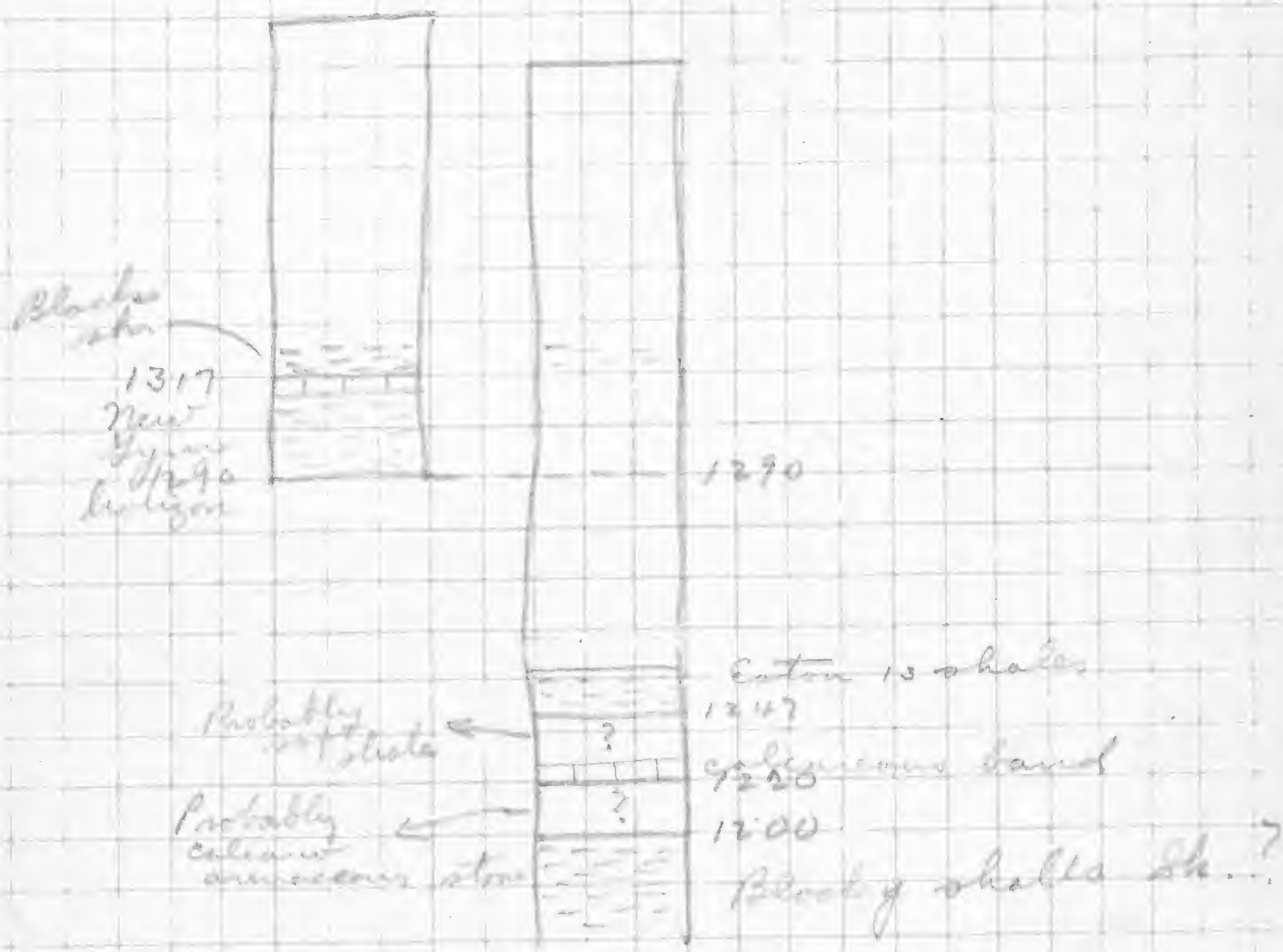
Enumeration of limits
N. deKay cc.

6d 89 ① 8' vertical 50 yds. horizontal calcareo-arenaceous rock, hard and resistant containing elongate or irregular black carbonaceous masses which are characteristic of this stone.

Elevation 1215-1220'

Fossils:- predominantly brachiopoda, Spirifer & Camarotoechia most common

Carbonaceous matter is not limited to vertical or horizontal strata, or masses but is often incorporated in the fossils. This material is very prominent.


Black shale
1317
New Brighton Bridge
1290
Entire is shale
1247
Probably part of slate
?
Calcareous band
1220
?
Probably calcareous shale
1200
Bloody shale Sh.?

C. bottei
S. peiplana
F. lenticularis

Rock along stream level in of sandstone in which are lenses of fossils which make lst layers. Vertically in the sequence the stone becomes more argillaceous & carbonaceous, the black layers & tubes being absent below. The top layer shows coarse sandy clay and the sequence is followed by a shale bed.

Her only prominent set of joints trends N 37½ W. of

6d d9° 1247' shale of 10 (Eaton) formation with Phelidoceras. On hillside above the outcrops small outcrops of "glittering rock".

1290' Shale of new figure encountered followed by large fossils and by increasing hardness.

And end at 1317' in the thick hard band forming a cascade in the stream.

6d d8 at 1317' black crumbly shale are met of the same kind as found above the new figure at Dirt Glen. These are not very fossiliferous

These are also found at

Fauna Sp. and in upper Olson's Elem.

1077

Fauna
N. californica
N. trigonalis
M. pygmaea
M. oblongatus
Ostracodes sp.
Ammonites
Lingula sp.
N. obliquata

Joints N36E
N58W

Black rock continues up to 1375' where it has become hard forming cascades. At 1410' soft shale shows in the soil indicate the presence of this below. The cascades are of rather sandy rock with few fossils.

Benoyer

6dB10 1280' 86a exp. 1078

Slabby ss below bearing
lines of fossils, in all about
3' thick. On this 2-2½' of
hard limy ss. followed by
a few inches (3) of shale
bluish in color, much
weathered bearing
S. pennatula ec.
P. flabellum
M. angusta
Rhipidomella
Orthoceras.

Sim la.
C. bottae
P. flabellum.
M. angusta.
E. Hamiltoniae
Upper limy ss. weathered
with many S. pennatula
and S. perplana

6dB11. 1328' just above 9 & B1st ss ft
blue shale with few
fossils.
S. pennatula

Aug 9.

6C D10 [illegible]

6C E10. 1382' [illegible] with
P. flexuosum
A. pennsylv.
L. granulosum.
S. [illegible]
[illegible] [illegible] with
Mem. & gran. [illegible] on L. 76
at Lake Mesauna

P. E. of Stream (which runs) on S.W.
of gully, lies between 6C E10 &
6C D10 but about 1020'.

Aug 9.

6C B12 Exposure 10 ft. on road near
N.C.H. [illegible] residence. Sh. shales
see threes for lists. Mem.
10' of sh. at 1180 – 1190'.

1218' Pagnesquamy.

15' from floor of quarry 1233'
calcareous ledge. Rock shows
a hard flaky shale
starved in fossils. The sh.
shales are hard and rather
sandy and become shiny
by exposition.
See threes.

1080

Aug. 14.

6 C D5

Level 1353'
Vert. 5'
Hor. 25'

Poorest one small exposure of coarse level.

Color – blue grey
Weathering – light grey with coarse granular appearance
Occ. – fine point fossiliferous small circular of pieces regular in size & shape

Well consolidated, strong tough to the hammer.

Pentagonia
P. [illegible]
[illegible]
[illegible]
[illegible]
Protophylodrom
P. [illegible]
C. tenuistriata
P. flabellum.

Poorest bed –
P. caminata
C. [illegible]
P. flabellum
C. tenuistriata CC
B. [illegible]
M. angata C
C. elongata
A. decussata
[illegible] CC.
S. crystatum
K. [illegible]
A. [illegible]

78

M. microstoma
Nephritomas sp.
G. broadcata
Abundant evidence of woods as seen in the rock.
C. concentrica
C. peplona
C. Chamitonia

This fauna has the aspect of that at Lower Quarry

Joints in this lime not well jointed and irregular.
N52W and N35E.

1082

1390-1410.

Aug 14. 1083

6CA8:- LM1.

1292' sandy shales in which H. obkaji, Bravoniscyrgonata and other crinoids are found

1300' Here shales have N. argita, R. principes, P. crinata, C. terminatiata. The same fauna and sequence as of 6CD5 + 6CC6

Only one set of joints is here well developed and trends N33E.

6CA9. 1320' The large quarry known as LM1 in Tem. 30 feet horizontal and 70' vertical. Colour:- brownish sandy shale. Weathers to irregular fragments. At 1320' b.s. on the top layer or ridge in the land that same as the land layer of the Alen Hyn.

Jarosite is an organic structure commonly noted here.

Fossils (see there).
Remember granals
Pelecypods are the most abundant

Stratigraphy:- same as Alen Hyn approached.

Relation to topography:- this level from tip of flat hills at 6CC5 and at base of

1323'

Sandy ale

1328 1/2'

Sandstone

1328

1325'

Granite

1319'

Blue limestone

ale

1313'

Aug 9. 1084

6C 334 87' above road level a cascade of some 45 ft. showing the following section

10' dark argillaceous shales.
5'5" alternating with dark argillaceous bands. Fossils are very abundant & large Euchrophs at 3rd "step"
4th steps shows same as below.
5" " calcareous sandy shale
8" " — Interval between 5 and 8th steps shows sandy rock breaking in large coarse slabs
capped at 1361' by a calcareous band characterized by tubes filled with shale & that at 71'
Below Spirifers and Cyrtorhynchus are abundant of the as known.

The limestone band forms the bank of the falls at this place

1371' shale crumbling out. 10 (Eaton) in an excellent exposure of 15' vertical. The very soft shales with the characteristic fossils are not exposed.

1393–1400' arenaceous shale showing fossils of gym. crinoids

A second falls exists at 1400' made up of shale.

Aug 9. 1085

6C08 1455' very soft black shale with N. triquetra. Ostracoda
S. perornatus. N. oblinguo
Pleurotoma sp. L. lapilla
Lucina aspinata
This is the soft shale seen at 1 10' at Eaton
P. fragilis

a boulder of limestone with E. billsbaeki
so probably from the band lying below this. although found in the stream bed near it was probably glacially lifted

The shale is only exposed for about 20' and is only found as a fringe along the stream. Half of a few inches thickness. It is so soft that it is very readily worn. This sh is found on the second at 6C08 on the calcareous band and had so. This must be the sequence seen at 8Qa.

At 1400' where Lo. should be seen the stream is in a flat swamp, no doubt due to Lo.

a 13 or 15' ex pounce seen at 1455.

60

Aug 9. 1086

9a 71 Road intersection, small exposure, few fossils. Hard, arenaceous shales 1500'

Aug 9.

6C 98. Small exposure on road Dully at 1400'
One foot of hard slabby ss. with P. flabellum cc T. Leptaena
Capped by a calcareous band which leached, with many fossils of 8-10" and on the blue shales with

A. rubrotuta
P. ornatula
S. perunatus cc
C. bectubus
C. nucleatus c
M. pygmaea
O. dilatata ?
See specimens.

1087

Aug 14

6CC3

Plot

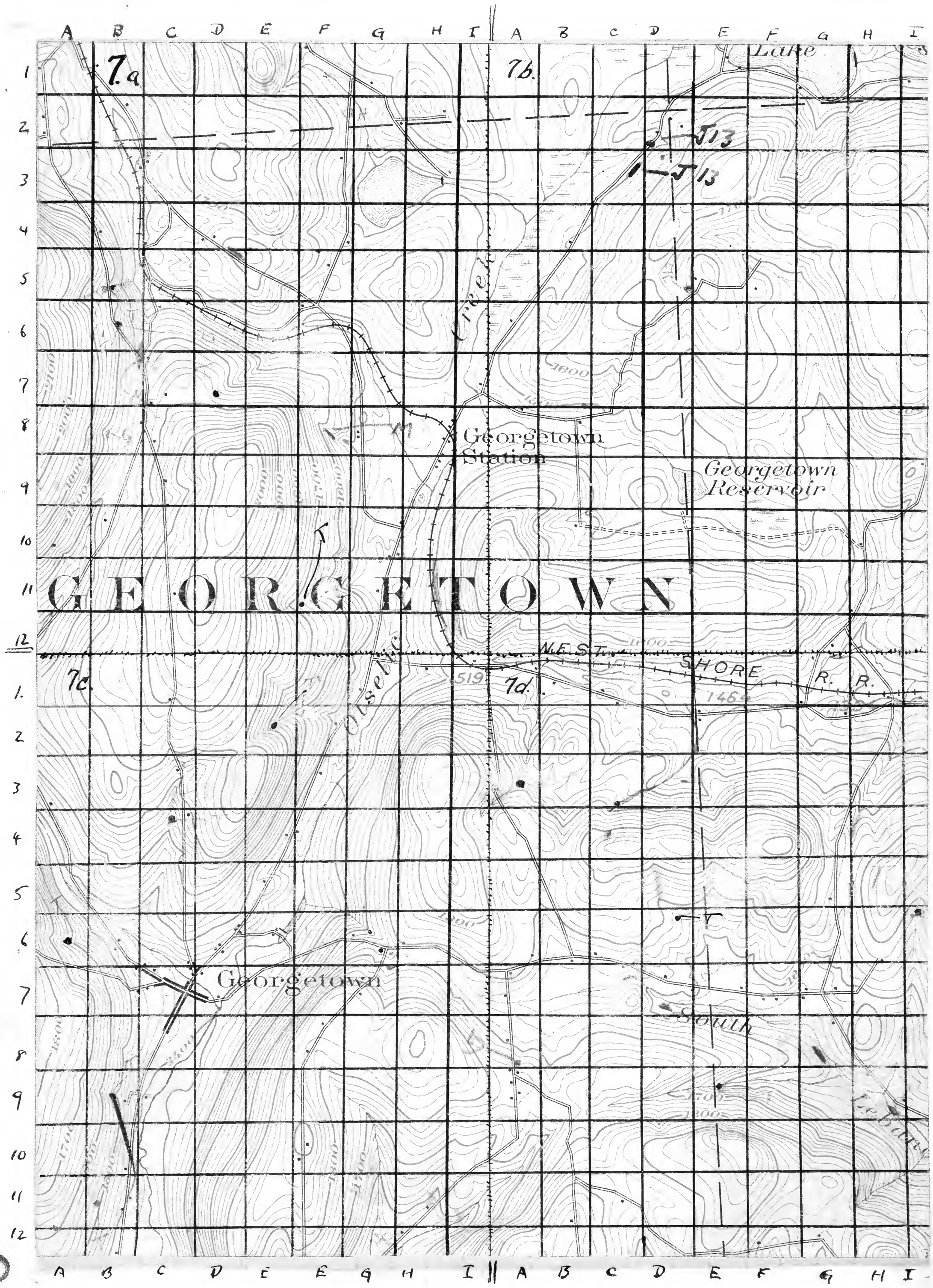
1380-1390

Pelphu

Line of clinic

above the Plot

80


7a
7b
7c
7d
Lake
Creek
Georgetown Station
Georgetown Reservoir
GEORGETOWN
N.E. STEAM SHORE R. R.
Olsebo
Georgetown
South
Creek

٤

August I

1089

7C69

24 steps above mean level
excellent exposure of Tully 17-20
[illegible]

[illegible]

Over a hundred ft. of
Moscow are exposed here
this is by far the best
exposure of Tully found.

96

7C B11

20 steps above road level of 1395' are exposed 16' of Gulley. Hamilton is exposed below in small patches. The Gulley is seen only in a normal gulley.

Aug. 3.

7C A6

23 steps + 1' Tully Ls. which is over 28' thick to judge by the 5 steps by hand level and large blocks of Tully found above the 5th step. It is difficult to see how these blocks could be carried up and hence must have weathered out from place. The Genesee-Tully contact was not observed here, hence the exact measure of the thickness could not be taken. Small exposures of moraine are noted below the Tully. Genesee in a 12' exposure is found about 50' vertically upstream

7aD7 45 steps - 2' from railroad level of 1515' or 1756' Dilly. Only 15 ft are exposed of heavily limonite with little adherent shale forming encasing in the north. At 45 steps limonite was found in considerable abundance. This zone always precedes the Dilly. Hematite is exposed nearly in entire section of the lowing.

11 steps above top of Dilly about 4' hematite 19 steps greyish shale.

a flat of [illegible] has been found at the Dilly.

Level of top of Dilly is [illegible] higher than 7aD 3+4 which can be seen from small plateau near 7aD7

Aug 3.

Resume at 7A A5 & B5 shows Moscow up to level at 1600' but above 800' Genesee & Sherburne slabs are seen in the road bed. The Delly was not observed but must occur at or near the origin of the road.

Resumed Aug 4.

10 ft. of [illegible] road bed (1810') [illegible] appearance of Genesee [illegible] Also [illegible] the [illegible] of the stream

18' [illegible]

2 steps below road [illegible] Delly are [illegible]

Dark [illegible] Delly [illegible] 1700 & 1810 but [illegible]

A [illegible] at 7A B6 shows Hamilton to about 1700 and Genesee slaty are seen above 1800'. Delly was not observed.

All along this road are small amphitheaters just off the road which serve as the receptacles for the stream that flows out of shallow maines down the steeling point of stream along the bank of this road exposes a broad stratum below.

7a.B6(E4) A small rapids just south of 7a B6 shows a fine exposure of 20' below road level which is 1800'

Reg 4

7a.B7 [illegible]

7a.C7 [illegible]

Aug 4.

1095

7dA8

a small patch of Hemerocallis in small bottle.

Aug 4.

1096

On Nonwich sheet

Shows interesting cavally due to top of Quilly which is at 1500'. The Quilly here is about 25 or 30' thick. The exposure is excellent and of considerable length. The rock is very loose, especially where shaley, so much weathered and crumbles much like the Moscow below. Where the limestone is pure it maintains its compact character. The bottom of the moss here is at 1476'. Ost. cubridge is abundance in lower layer.

The limestone seems in all probability accounts for the flatness of the valley to the north of the exposure.

At 1544 the Hamilton is again and is exposed in the side hill vertically for 40' and is seen to dark fish. Although quite as dark as at 27, 1544 and 6" layer of rusty brown shale near top.

At 15 rods above about 1520' a cavally shows an excellent exposure of the limestone

1 rod 4' of shaley shales
1' of dark limestone
concretionary 20. The shale
[illegible]

slaty shales.

3rd step the same as above. Then 3' of same are seen capped by a slatty much jointed band.

At 20 steps from 1320 a cornice of 5' consisting of thin bedded silty shale [illegible] with thin bed of sandstone capped by 1½' of blocky ss. grey in color.

A joint set in the blocky ss. trends N62E and the joints are spaced 4 to 5' apart. Minor sets spaced less than a foot apart trend roughly N63W.

At 22 steps heavy bed of ss splitting in rectangular blocks. 1' by 1½'. These blocks are an expression of the jointing noted above.

At 29 steps rock [illegible].

July 21.

A.
7C 6G (G7) 12' Greene shale, dark, fissile, some silty bands near the base.
Joints N80E 85° and N11E 90°

Fossils — none.

Photo 1

B
7C 7G (G1)

Good Photo

From 1660' A.T. (Road level) in a direction S15W up ravine. 6 levels (5'5" x 6) = 32½' above road a small cascade made up of 8-10' of rock of which [illegible] [illegible] the Greene [illegible] 3' of the four foot cascade at this point are of siltstone, blue gray sandstone. The sandstone forms a [illegible] for the stream.

11' above (7C 7G(G1)) 1½' of blue shale like the Greene but more thinly bedded and slightly coarser. 8' above is 2½' feet of shale like the Greene but capped by a few inches of more arenaceous stone.

C
7C 7G (F3)

22' above 7C 7G (G1) 1½' blue shale, fissile and brittle becoming more arenaceous [illegible] still at the top it is a fine ss.

Large ss slabs in the brook indicate arenaceous rock above but it is covered.

2.

7C F6(C8) 33' of [illegible]

[illegible] Purple

[illegible]

N N E 25° S. N 14° E 90°

Fossils

Tornuma Phylloceras

P. [illegible] M. [illegible]

S. [illegible] M. [illegible]

T. [illegible] [illegible]

P. [illegible] C. [illegible]

F. [illegible] P. [illegible]

N. [illegible] [illegible]

R. [illegible] Many crushed fragments.

S. [illegible] H. [illegible]

C. Tornuma [illegible]

L. [illegible]

Good Photo

L. [illegible] of the hard [illegible]

[illegible]

30 to top of [illegible]

[illegible]

[illegible] hill is at level of 1595'

Photo 2.

3.

7C G6(C3)

July 1

Contract No. 15

[illegible] to a
[illegible] heavy
[illegible] that the called
[illegible] a [illegible]

July [illegible]

Contract No. 5 x 11 = 55 5 x 4 = [illegible]

= 63'7" below mud line = 1596'

The Pulley is 20'8" thick at the joint

Hence [illegible] with the layers
of bottle [illegible] the [illegible]
[illegible] of the [illegible]
joints and [illegible] large blocks
[illegible] "Lifted off floated"
[illegible] the surface of the
stone in the rock is [illegible]
[illegible] [illegible] probably due
to [illegible] [illegible] of the
[illegible] to the bottle joints

July Photo 3
" " 4
Scattered " " 5
July 17 Vessel [illegible]

} Fair

5.

July 21

1102

7d 67

a large earthenware 12' vessel
containing shells, small & large
and large specimens from mouth &
specimen of the pottery vessel
found.

20' up from the floor of the house
eight feet of rubble, then a layer of shells
which should be where recently the
house was standing. Thousands of
Lamellibranchs.

Note:- Throughout were other sherds
in the rubble at 7C 8C (03)

90

6a

July 21

1103

7d 89(80-48 88 map). Blue shale with irregular fracture — an outcrop about 11 feet from

[illegible]

[illegible]	C. [illegible]
[illegible] (Bear Lk)	N. [illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	N. [illegible]
[illegible]	

[illegible]

[illegible] 7C F6(C8). These fossils, as also those of the 7C F6(C8) outcrop, have the surface facies as those of the shales in the vicinity of Ft Carlille although they are at a much higher horizon.

B

7d E9 a foot fossil of Tully 1618'

7.

July 22.

7d H4

[illegible]

angle up. [illegible] end of [illegible]

[illegible] the [illegible] of the [illegible]

[illegible] 2 [illegible] (Fine)

[illegible] Cornelia L.

July 22.

7a

7d H10

[illegible] irregular [illegible] fossil [illegible]

[illegible] [illegible] [illegible]

[illegible] and [illegible] [illegible]

[illegible] of [illegible] [illegible].

The point [illegible] [illegible]

[illegible] the [illegible]

N 4 E and N 13° E

A [illegible] set [illegible] [illegible]

N 12 E, N 14 E 92° W

A [illegible] [illegible] [illegible] N 5 7 W

Fossils at Idaho

1105

E. perplexus
C. micromorphus
C. gracilis
Orthoceras
P. mieta
Bronnujia sp.
Tentaculites sp.
Lyrocrinus ohioensis
P. sloanei &c
L. pennatus &c
J. barbergensis
O. semicostata
M. oblongatus
M. trigibbus
P. sloanei
P. semiangusta
Leptaena sp.
M. concentricus
C. ashburnia
C. rotelliformis
O. planula
P. dichotomus
M. acclivistriatus
M. varicosus
M. lineatus
Bryozoa
S. Stultum
J. corniculum
P. vertumnalis

July 22

7d06

Tully contact with Hamilton
level of 1682' Bs. of 1670-0
Little 4 Rolly
Thickness: - Stepped up by line
from 4 readings. On top of the
Bs. was 1'3" of soil. Not a
Hamilton. Total thickness
21'8" - 1'6" = 20'2"

The Tully here makes a long
series of low cascades as the
water flows etched by the
bedding planes, and joint
surfaces. The typical
pitting by solution weathering
again appears displayed here.

The Hamilton was first
encountered at 1638' on
a roadcut above

The Marcellus is 27
thick & lies 5 feet below
the base of the Tully.

82
1638
44

9.

July 24

1107

7dA4

Single appearance of Tally and attached Barometer 1682

Distorted by heat

Due to [illegible] of [illegible] from [illegible] the difference is found 20 [illegible] [illegible] [illegible]

140
12
152
1640
1672

Principle [illegible] The line

Picture → [illegible] of 1732'

Roll 2 [illegible] [illegible]

[illegible] of the [illegible] of the [illegible]

of 1757 [illegible] [illegible]

[illegible] the appearance [illegible] of the [illegible] [illegible] 1770'

at 1635 [illegible] would be [illegible] [illegible] the [illegible]

note :- [illegible]

[illegible] the [illegible]

[illegible]

28

In the road at 1740' grey [illegible] sandstone are found.

At 1720' [illegible] shale is encountered. The road follows for a short distance along [illegible] shelf but to the east the hill is a [illegible] plateau some 20 or 30 ft above the road. This is [illegible] formed by the resistant [illegible] [illegible] level.

72D5. [illegible] Blue, [illegible] of fossils [illegible] deposit.

Fossils

P. rana cc	[illegible]
C. [illegible]	Platycrinus sp.
S. pennatus cc	C. [illegible]
Bryozoa	Plant stem ½" diameter
N. ovata	Rhipidomella sp.
Orthis sp.	A. [illegible]
Crinoid fragments c.	R. fimbriata
S. [illegible]	D. [illegible]
[illegible]	C. [illegible]
S. [illegible]	N. triquetra
S. [illegible]	Grammysia sp.
N. [illegible]	Taonurus [illegible]

Crinoid [illegible] of the same stone is found on the top of the hill. Here the rock breaks into angular chips. It is [illegible] weathered [illegible] grey in [illegible] [illegible] [illegible] [illegible] the same as the [illegible]

11.

1109

July 24

7a B6 — Monocot shoots 12-15' with leaf
a remarkable shoot with leaf
fronds.

2 [illegible] with
Spirifer sp.

~~A~~

7a D4 — a few feet of [illegible]
to 7a B6

July 2 14

12.

1110

7a 7 11 [illegible]

[illegible]

Photo one roll 2

Bearing N15E and N22W

The Tully contact on December 1 of 1677! All of this land was not appropriated in the Absaroke reservation. Chief Arapooish [illegible] 50 or 60 people [illegible]

Photo 3 roll 2

Joints at 15-27'
N18E and N51E

The name is written for flower [illegible]

Photo 6. Terraced hill. Tully may be in top terrace. Represents profile of hill covering 7bA10+11 7bB10+11.

72

N51E

Problem 3
hole 2

N18E

13.

9CC4

July 25.

Contact of Mesozoic limestone & Quartz-Mica Schist.
Thickness 1 to 2 feet.
Inclination [illegible] 26°

Contact of Mesozoic quite abrupt. The Mesozoic - fully consistent in quite transitional.

Joints in Mesozoic [illegible]

N17E, N72W &
Fully contact with Mesozoic 12 steps below 1700'

Fully contact 1685'
Below 1661'

1755

Schiste in contact with the Mesozoic at about contact of 1755' and [illegible]

20

Td D3

Georgetown Lebanon line

Georgetown-Lebanon Co. Line Locality

1113

Pelecypoda

Orthonota carinata
Palaeoneilo emarginata
Cimitaria recurva
C. corrugata
Modiomorpha mytiloides
Lyriopecten orbiculatus
Modiomorpha concentrica
Orthonota undulata
Nucula bellistriata
Cypricardella bellistriata
Orthonota parvula
Nuculites triqueter
Grammysia constricta
Goniophora carinata
G. hamiltonensis
Sphenotus cuneatus
Modiella pygmaea
Leda diversa
Pholadella radiata
Lunulicardium curtum ?
Palaeoneilo mutata
Actinodesma erectum
Nuculites oblongatus
Grammysia cuneata
G. arcuata
Plethomia sectifrons
Liopteria conradi
L. dekayi
Palaeoneilo constricta
P. terminatrista

Brachiopoda

Spirifer granulosus
Stropheodonta perplana
Isojadoleptus carinatus
~~Sp.~~ Schuchertella chemungensis (perversa)
Spirifer permatus
Chonetes coronatus

Georgetown-Lebanon Line — Fossil List cont'd.

Chonetes sutubus
Cyrtina hamiltonensis
Dibuloidea lodiensis var media
Eunella lincklaeni ?
Lingula sp.

Gastropoda

Hyolithes aclis
H. striatus
Platonatis patulus
Loxonema hamiltoniae
Gyroma capillaria (common)
Cyrtolites nitellus
C. pileolus
Protowarthia acutilirata ?

Trilobita

P. rana
C. boothi
H. delsayi

Orthoceras sp.

T. exigua
Bryozoa indet.

Crinoidea
Botryocrinus obconicus (Goldring) Labelled by Miss W. G.

21

July 31

7d04

[illegible] 1665' [illegible]
[illegible]
[illegible]
[

July 31.

22
7d A (5, 6, 7)

Ravine barren of outcrop, but bed contains mostly chips of dark blue shale and large sandstone slabs. These rocks could be identified with the [illegible] and Chadakoin respectively

22a
7d C7
D7

Small pieces of blue sandy shale [illegible] with Fauna

L. [illegible]   R. [illegible]
Spirifer sp.   S. erecta
L. [illegible]   C. [illegible]

Joints N 72 E   N 14 E

44

23

July 30.

74D5

[illegible]

N-8E N8W

[illegible]

20' [illegible]

[illegible] 1720 level.

[illegible]

Dolly to. Beneath level of 1660

[illegible] about 20'

N 75E

Bottom of Dolly 12 [illegible] +2'

[illegible] 1671'

24

1117

Rg of L.

ICE 2 Mones

3 steps above and level with
blind, a bales of [illegible] partly
with also [illegible] fronds
Fan appears as 25' high. on
local patches [illegible]
[illegible] fronds but [illegible] [illegible]
more [illegible] of fronds

1871
20' Stale

Fan a
P. radiata — C. [illegible]
C. californica — D. [illegible]
R. [illegible] — P. [illegible]
O. [illegible] — N. [illegible]
C. [illegible] — C. [illegible]
R. [illegible] — N. [illegible]
S. [illegible] — P. [illegible]
S. [illegible] — P. [illegible]
S. [illegible] — S. [illegible]
P. [illegible]
[illegible]
J. [illegible]
C. [illegible]

at 24½ steps a [illegible]
slabby [illegible] comes into the
Hamilton

Fully [illegible] 4 steps on 1678½
Fully [illegible] 4' [illegible]
(24) 27' above base of fully [illegible]
(39) [illegible] of fully

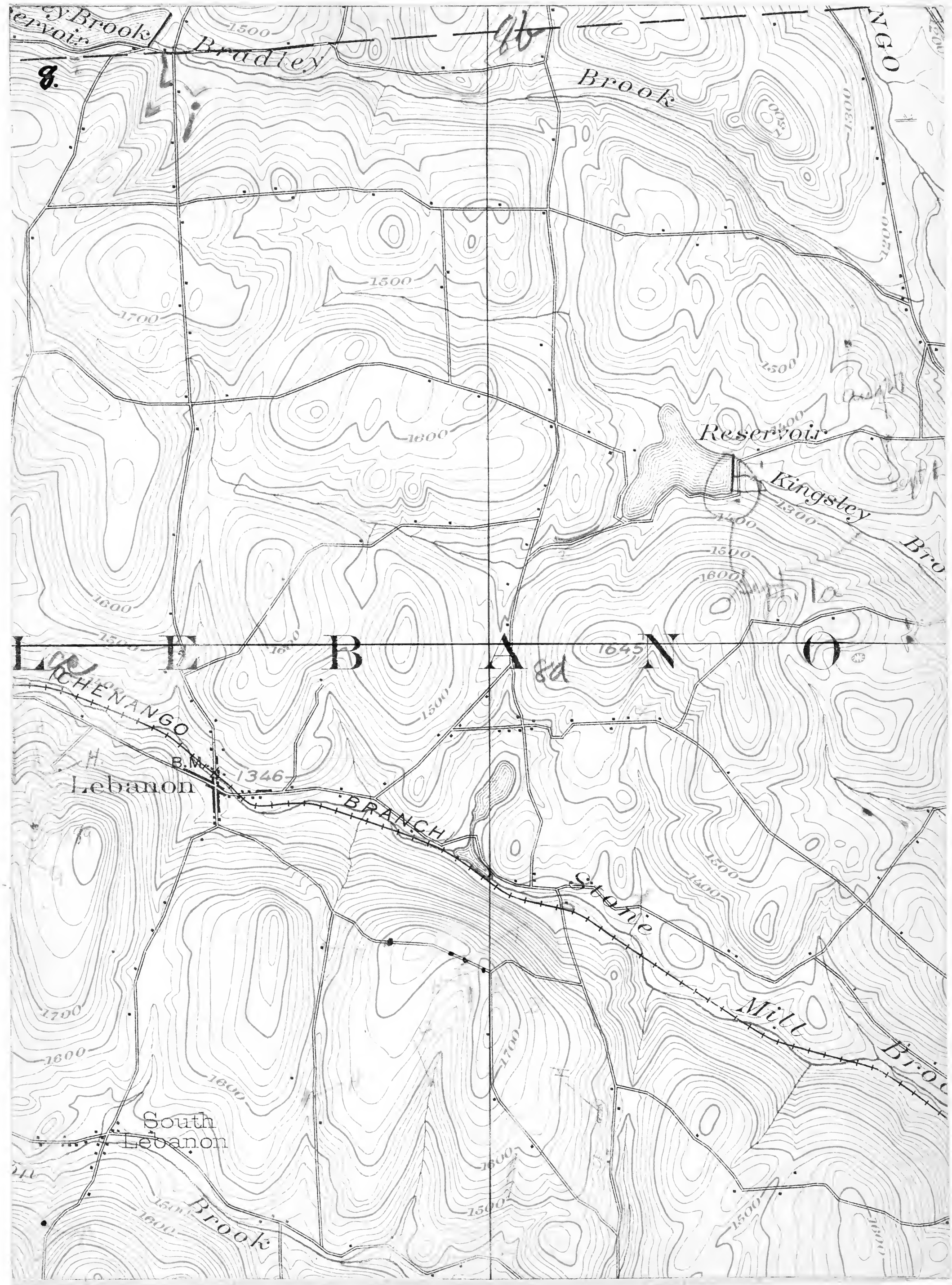
32' above base of fully ravine
divides, one fork descending N63E
the other N40W.

ICE 1

38

24 cont'd.

Moores Glen


Bradley
Brook
Reservoir
Kingsley
Brook
LEBANON
CHENANGO
B.M.
1346
Lebanon
BRANCH
Stone
Mill
Brook
South
Lebanon
Brook

Sept 3

1120

Sec 2 T3 Bradley Brook reservoir

1420' Sandstones in 10-15' square slabs and blocks in thin flat layers at the top but more compact and heavy-bedded below

S. pennatus
R. rectum
T. carinatus

These fossils are like those of the U. Ludlow horizon and are referred to that bed.

Joints N30E.

Same horizon at road leading south from Bradley Brook Reservoir.

Sampling by first house at 1490' blue, buff shales with some ss. below and thin slabby ss at 1480'. Rock first encountered at 1460'.

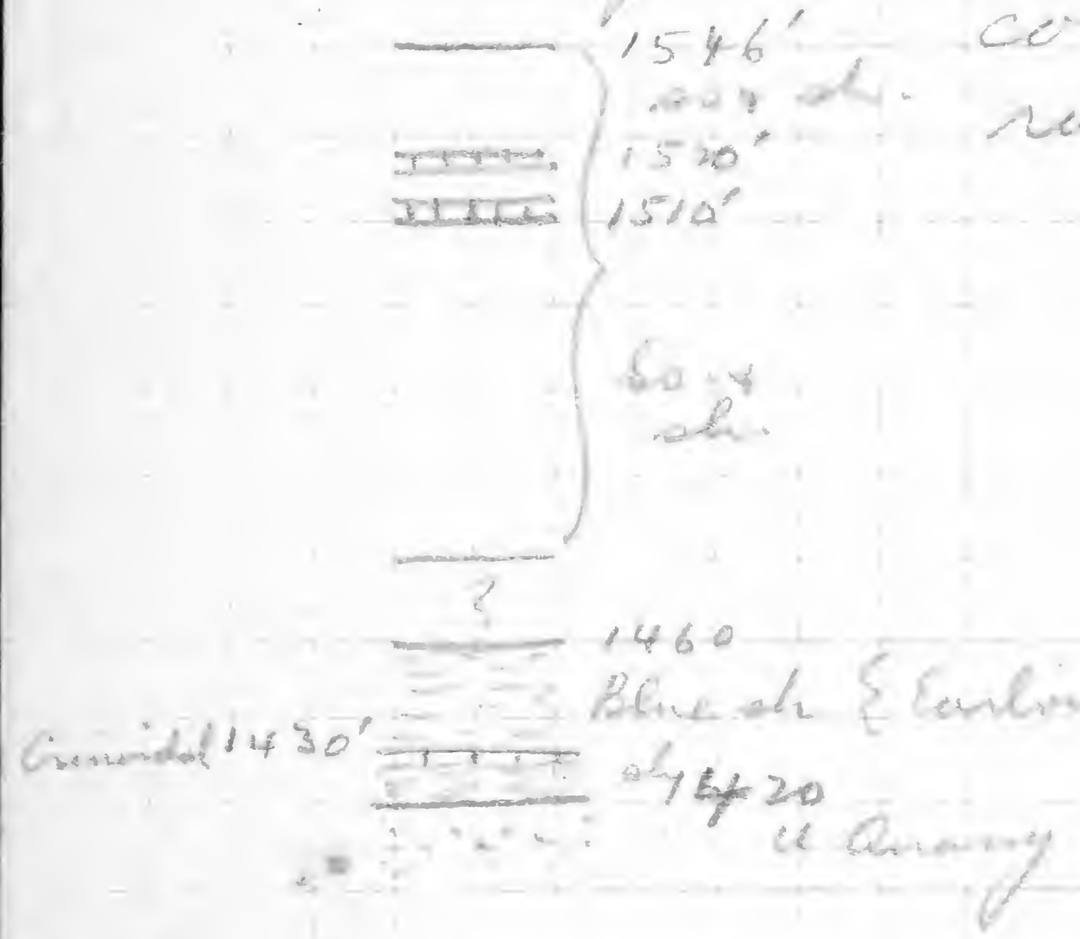
1510' A flat in ravine and hard arenaceous shales with Tentaculites giving up to ss. and a hard lichen band weathering with a pitted surface and other more slabby slabby sandstones. A leached limy band at 1520' is composed of spirifers in the main while that below is of Spirifers + Camarotoechia. Just below no. like that at the top of the East ravine at Kingsley's brook.

1530 hard ss and shales

to 1530 slabby sandstone
1546' So.

1121

8aD243 1430' below houses and at their level a thin band of the crinoidal ls. and above this blue shales to about 1460'
These shales have
R. reticularis
R. spiriferoides etc.
S. pennatus
This establishes the sandstones below as those of the U. Avery as it is exposed immediately behind the houses at about 1420'.
Crinoidal stone 1' thick
The flat here where the houses are is probably caused by the presence of the ls, which is contained in the first ravine.



8aB2 2. 1445' U. Avery ss. small exposure.

Sept. 3

1122

E 9 b d 7

Dark shales with L. lanna occurring at 1320'. These first outcrop at 1290'. See thesis.

36

86H12

1417' slabby sandstones 10-75 vertical bedding in slabs 3/4" to 1" thick. a joint system trends N30E.

This sandstone layer must be the same as seen at 1310' in 9dB4 the same at W.A. Martin's.

Camptolaelaps & Spirifer are common on bedding planes. Crinoids. The sp. are mostly on top. H. alberti

These are also exposed in the road.
T. carinatus

Augw

East India marine

1263' hard sh. slide for 10' almost a sandstone breaking into flat slabs.

1328' 10' of soft blue shale crumbling into small fragments. See Theirs for fauna.

1370' sandstones breaking into flat slabs. few fossils. 3' vertical.

These persist to 1424' where 5' of rock is exposed alternating shaly sd and ls lenses composed of fossils. Joint N 32 E. T. coronatus is common in the ls. as are Spirifer & Cyrtorostrum.

Ls. persist above this.

Aug 20.

(West ravine)

1255
60
1320

1320' 8' vertical of slabby sandstones.
See Thurs.
Q set of points trends
N12E
N32E

15
5
75
21
1285
1336

1336' Blue shales immediately on the sandstone.

Fauna of the blue sh.

24
10
12
152
1255
1407
28

1385' 12' of shale and slabby sandstone alternations

1407' slabby sandstones

168
13
181
31
125
1438

A slab of shell is found at 1428 indicates that layer of ss with is known to be nearby.

37
5
175
13
140
1555
1445

1445' layers of sandy sh. with large Spirifers & large Camarotoechia
1461' 3' bluish sandy sh.

S. pennatus
S. granulosus
T. carinatus.

Aug 27.

[illegible]

[illegible] 6' [illegible]
[illegible] of [illegible]
[illegible] argillaceous [illegible]
[illegible]
long [illegible]
[illegible] W. Corner.

1316' [illegible]
[illegible] feet [illegible]
4'.
B. [illegible] point. [illegible]
[illegible] [illegible] [illegible]
W. Corner.

1327' [illegible] feet [illegible]

1350' [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible] [illegible]

1127

Spot. 1.

Blue shale near roof
1390' elevation

J. cornutus
P. rectifurcus
Quadrilatus
C. rectilineus
L. pinnatus
N. Arquatus

Here we worked off
the roof of the West Shore
R.R. cut.

86 Sept. 1 a

[illegible]

[illegible]

[illegible]

8b² Blue shales lining road along stream bed.

T. subemarginata
S. solenoides
Avicula pectenoides
Fossils are common
G. arcuata
C. elongata

These shales are generally highly compressed and contain lenses bearing more silt. Below the Eaglville band. They are also those found along the bridge on pasture at Kingsleys brook.

14.

1130

July 27

8d B9

[illegible]

July 27

[illegible]

14a

8d A11

[illegible]

July 27

[illegible]

15

July 27

BC 87

20' of the west side of the
effluent of Nat'l Ice House of 1905
1925

They are black, fresh and
soft. One is about 1/2' of pitch
other the end of a Kitchen
piece. Some of the scale
pieces are a dirty red brown
but not all. All have
shown no 1' thickness of
shell. Some into the
the usual yellow shell are
also represented

At end of this day 1785 to
E. Bell by Stroll

July 27.

15a

BC 87

Bulk specimen of blue M. edulis
Tag 1

P. pennatus
P. ciliatus cc
M. antillarum
S. gibbosus
R. fenestrata
C. [illegible]
L. [illegible]
C. [illegible]

M. cubiformis
M. cordiformis
L. [illegible]
P. fecunda
T. [illegible]
Teredo [illegible]
P. [illegible]
[illegible]
[illegible]

16

Rhynchonella
Yl. [illegible]
C. [illegible] the
Chonetes

Productoceras sp.
U. [illegible]
Y. [illegible]
P. [illegible]

8 c d 7 (6D)

a 3 ft. exposure of shales with
abundant limestone
[illegible]
that [illegible] bottom of
outcrop of [illegible]
S. [illegible]
S. [illegible]
S. globosa
H. [illegible]
Polemonia
P. [illegible]
C. [illegible]
C. [illegible]

Cyathocrinus
[illegible]
Zaphrentis

the shales are quite [illegible]

Dimension: 40' above 8 c d 7 ( ) occurs the shales (unfossiliferous) referred provisionally to the Genesee. At from 1680' the rock may be followed in wood gullies. At 1710' the shales are black and fissile as at the larger exposure 10' above

At 1705' hard blue ls. is found in the wood gully just east of the blend and mixed section of the wood. The limestone is in thin bands alternating with calcareous shales. The shales ~~that~~ blend with the black ones above by a gradual transition. Small [illegible]

60

[illegible]

[illegible]

[illegible]

8CA11

18.

July 27.

1560 [illegible]

at 1520 [illegible]

N7E N69E

at 1504 [illegible]

[illegible]

[illegible]

[illegible]

N31E 90° and N78W

[illegible] 20 [illegible]

N11E and N78E

[illegible] at 1615

[illegible] 1530: [illegible]

[illegible]

Top land. There is considerable

exposure of shale in the

direction, the increase in

argillaceous matter probably

accounts for the thickening

of the bed.

[illegible] 2'8"

[illegible]

[illegible] and continues

[illegible] up the

[illegible]

19

July 30

8CA4 Pulley with pin at 1689'

A small hemispherical projection in 4 steps in 21 ft. of pulley is a small pulley. Block the lo. with oil and it will come i from the top. The surface is pitted by numerous small scratches. The surface is by a light brown. The brown is heavily loaded. It is larger single layer. Seems 2 ft. thick layers of lof a tenacious water, pitted cohesion [illegible]

Tools are not observed in the h.

Heated Moment. Pulley contact is not observed. [illegible] actual [illegible] contact.

6" from base of pulley 12 of [illegible] block of [illegible] the [illegible] of [illegible] [illegible]

At level of 1675' Moment [illegible] [illegible] of [illegible] by [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible]

P. petulans
U. bellistriata

at 1645' armaceous Flowers
shales.

P. petulans
M. pygmaea

[illegible]
The [illegible] nearly 300'

[illegible] 550 ft
bottom of Valley.

Aug 5.

Red Hate :- First stone encountered at
9d H7 1160' and consists of 2' of
c coarse grey sandstone with
least shale. This stone lies
below the level of the upper
layers of the U. Quarry. This
stone contains a number of
steps. 1165' 0"

1168' Stone is sandy but
very irregular in
fracture. Oil is also present
and is seeping into the
of fracture. In the clean
limestone more abundant
in this than in the layers
P. limosta and a small
Gymnocladine were noted

1170' 0" Blocky, blue, sandy
shales with h. calcareous
blue band at 1169' are
noted. These are very
fossiliferous (see Track).

They have an west of
joints spaced widely
apart, trending N 33 E 89 S

These fossiliferous shale
continue to 1190' where they
merge into a less consolidated
blocky of similar texture.
Slight fissuration in 2' thick
bed features in them.

On this limestone at the
elevation of 1192½' comes a
soft shale bed with

of shell fragments, many species of kinds. The transition is not so lithologically as the change on the limestone have many crinoid remains and small pieces of the blue bo. on the other hand has perhaps of shale and many corals at the top.

20' approximately the limestone has to be called by virtue of its boulders.

at 120' a block of 20 comes into the shale, it is 6 or 7" thick and is shale and ceramus in comparison to the rest below. 2½ to 3' above this band is another of the same kind

5' above the second band is another 1' thick

121 9' blue shaly shale

125 2" fossiliferous (species) Cor. long tied with up to 1" to north showing blue algae irregular of fracture and showing a pleuropt. interbedding limestone

Jump at 125 2'

N. trigonica (large like Earlville)
Cyathocrinus top
O. parvula
O. cornuta Note: These fossils
C. scitula are like Earlville but
C. micromalina occur in beds of
B. crinistria perhaps less abundant
L. globosa interbedded with blue
[illegible] beds.

SS 5 - 10'

1290

? ?

1280'

Blue sh.

21 SS

Blue Sh

1280

1295
1192
103

Appears continue to 1280'
where the valley widens. At
about 1260' 50' from the
upstream, there is a bend to
bank of 1/2' to 2' thickness
in it. This bank forms a
cascade in the brook where
the water crosses it.
At 1280' the slabs are sandy
and brown, greyish blue in color
They are not very homogeneous

1290' gently dipping
flat of the valley. Zone of
bedding is very irregular. The
bedding is N30E and N50W
parallel to tangent of stream

Above as continue up for 5'
more beginning to change
and splitting into thinner
slabs. They are more friable
under the pressure of rocks
in the line
joints N30E & N50W

These conditions happens
are evidently by the course
of the stream. At 1300' will of the valley
stream is gentle and the
slopes are low.

Aug 5.

1141

9dD5 at 1195' 30 yds horizontally and 40.5' vertical of adit level in U. Quarry. Probably the same vein. Sandy conditions only noted also.

Joint

N29E 90° and N57W with an irregular parting at various angles.

Typical Quarry fossils.

2 pentamers (any transverse) abundant

C. coronatus rare. cystids.

Aug 5

Middleport

9dE1 Directly across road, east of Mr. C. A. Oakes residence 1120' are 8' of massive shales that crumble readily into small fragments. These represent the band below the U. Quarry of the Golf links & those at the bottom in Randolph Ravine large. The beds not very fossiliferous.

9dF1 1272' Coarse, thin-bedded sandstones referred to the U. Quarry horizon. They are interrupted by some about 8' exposed. The fossils of these rocks give it the appearance of the shale below the Crinoidal at Red Gate or the top of the U. Quarry.

30

Exposure at 22 m. where face is a smooth gray wall showing large concretions pocketed in the lower of the sandy shales at 1272. The base of this gray is at 1260' and consists of shaly ss. as found in the U. Gray. The gray wall is a joint face trending N30E

Aug. 5 Patterson's

21-22 l. — 1170' gray sandy shale

96 F/9 12

at 1186 these shales are capped by heavier stone that does not so readily crumble on exposure.

In the shales at 1185' Orthoceras and K. lamarcki common
R. umbonata
C. inflata
These shales are exposed at Rockville gorge.

The bed layer is quite sandy.

At 17 steps above 1110' concretionable compact layers of ss have crumbled in between the shales and thus form cascades in the brook

at 1205' ss. quite bony [illegible]

predominate and give rise to slabby kind breaking into rectangles

1205' 2 20' cascade
shows the appearance of alternating very regularly of sandy shale with slabby ss. the ss layers are rarely more than a foot thick at the most.

235' sandy shale and ss slabs.

1251' some sandy shale which gives way in a foot to slabby ss. which are now predominant in a 25' cascade. this second falls consists of U. Quarry rock.

Signature of the Commission
Ed. Lis fr. 1267' to
Commencement
P. Haskins A. Carmichael
all bed to the appearance
of the fr. at the quarry
light of [illegible] of the
[illegible]

1289' the rock is more massive, less well jointed and breaks into more irregular slabs like the sands which carry abundant shale. These are probably like the slabs below the crinoidal stone at Red Gate

at 1285' in the section of the
Schizocrinus zone of
Red Cliff Creek. This
upper layer of the U. Dev

Fauna of Sandy Creek at
1289'

P. flabellum ce.
S. hamiltonensis c
S. mentum
B. subcrassata
P. crassicosta
Tornoceras (spirol)
Large Spirifers
A. Genetellum
I. cariatus
Lyriopecten macrodontus
S. granulosus.
C. corrugata
C. terminatus
C. hamiltonae
R. grandis
S. complanata
This list establishes the
horizon from 1289' to
1300' as the Pelecypod
horizon in Red Gate.

1300' Truly of fallowin streams
bottom laid square blocks
of a hard quite pure la are
found which correspond in
stratigraphic position and
character to the crinoidal
limestone at Red Gate. It
is about 1 Miles and from
the head of the falls. Here
the stream flatten out in

a valley of small angle
1145
1305' dark blue shales
the same as those on
crinoidal stone at Red
Rock are noted the form
here is manifestly different
from that below. See lists

those blue shales on
[illegible] have been and
above 1305' lifted along
westerly about 30°

Pag. 5.

1146

19 A – 19 J
9 G H/J) 10

1250' small canada grey blackish white flat quartz pebbles & small debris

1261 small bed of sandstone

1267' slaty sandstone & shale

1304 as becoming prominent
Joints are as.
N 32 1/2 E N 64 W

1315' sandstones with a dipping of 20 on some of the larger slabs. The slabs measure 4 to 6 feet

1320
20
18
1347

at 1347 the blue slate & blue the crinoidal are found

1363' the valley widens near the top of the hill

A three inch lead pipe was located at 1365. This pipe was without doubt the cause of the flooding of the valley.

This slat 9 lb. contained a rapidly thinning of stone and D. sulphide

Aug 6

21i 1570' 25' hor 10 vertical of
9a A12 blue shale with purple brown weathering

Joints N 52 W and N 30 E

Fossils
S. pennatus M. subalata
S. carinatus ? transverse
S. subemarginata
Lingulella sp.
N. triquetra ?
C. cornutus (small)
N. debayi (small)
These have the appearance of Niagara shales.
Texturally the shales are like those at Dadville

Aug 6

23k 1480' sandy sh. of Niagara
9d H 5 See thesis

9d B7 21-h Pag 6

1193' a hard [illegible]

[illegible] a. umbonata

C. [illegible]

[illegible]

[illegible]

[

Aug. 6

1140

G 9d.
9d D 7/8

[illegible]

Next type 1120'

Pg. 9.

1491' [illegible]

1498' [illegible]

[illegible]

[illegible]

1501' [illegible]

1505' 8" [illegible]

[illegible]

Tracks [illegible] NESE + NESW

[illegible]

1509 [illegible]

[illegible]

1514 [illegible]

[illegible]

Sept. 6. 1151

9a B6 On Golf-links 16 steps above Chem. Lab. bluish sandy shales mentioned in Prosser's reports. Exposure 7' vertical. See Mem. for fauna and description.

New Hyne between 1120-1140.

Aug 19.

Entrle

Crosscut at face of 1130'
Joint on lo. N 5 W.

Sept 1.

9bB1 Bed of slabby ss. referred to 8Qa.
Slides.
1280'.

Joint plane trend
N 38 E 90°
N 34 E 90°
N 33 E 90°.

The formation is about 4' thick
the bottom 2' being coarse and
the top two being slabby ss which
has the appearance of that
found in the Ch. Quary.

6dC12 Shales referred to next lower
horizon top at 1215'.
See Stress.
Joint N 36 E

A cast of a scleraulus was
noted in this opposite bed.

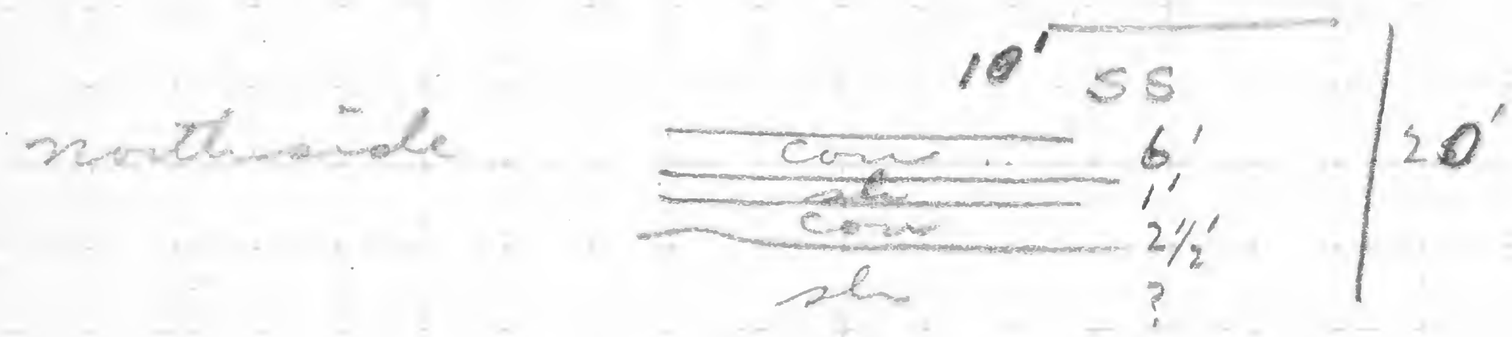
Sept 6.

1152

9aB6' U. Quarry

Floor at 1428'

Floor shows dark slatey shales often well ripple-marked. Then alternate shales of the same kind with so. The shale beds are not continuous but lenselike. On this a bed of concretions, localized in east wall and extending along south wall for about 50 yds. On north side this bed consists of two parts separated by slatey shale.



Some of the lower beds over so but the parting planes* are coated by black sh. The only fossils known from these black shales are

P. fragilis
O. undulata

Greatest height of quarry 42'

1457' concretions and fossils are numerous in the so.

L. macrodontus
A. acutum
S. lunettonensis
C. cornutus ogilvie
G. alveata

Some of the so is locally a sh. conglomerate

The appearance is over 100 yds. in length and about 20' vertical at its highest.

1310 in the wall there are overturned and broken in large slabs.

Joints at about 1320.

N40E 96½° NE

Aug 9. 1153

Payne St. Ravine

9a B} 1
C}

Behind Payne residence at second house 1160'
18' above 1150' Sh. sh irregular of fracture and weathering into heavy pieces exposed for 110' vertically.
C. actinus
C. actigenus

A short distance upstream a gravel wall is developed of these heavy sh. The bottom of the gravel is at 1182'. At records the joint faces one set but other joints are obscure. The prominent joint trends N45E 93°N

1181' hard sandstone (lime) has been come in exposed nearly completely of fossils. These have been flattened in the increasing hardness and increase of firmness of the various layers from 1207 up. The sh become less hard.

Joints for 100' for 200' for 300' for 400'

The falls at 1200' consists of a bed of this hard sh. in which heads of Sarcinulas were noted.
Camarotoechia & large & small Spirifers indicate age of the bulk of the sh.

Fr. 3

From the stone angle section shale to the stone head is an interval of between

Fossils are most numerous in the upper part of the formy.

Joints N 32 E 90°
N 33 E nearly 90°
Some locally dips a few degrees more than 90.

20 + 25'

1154

1210' shales of Coleton formation
1222' large exposure of blue shale which shows coarser and are those found at the new Gym.

Payne St

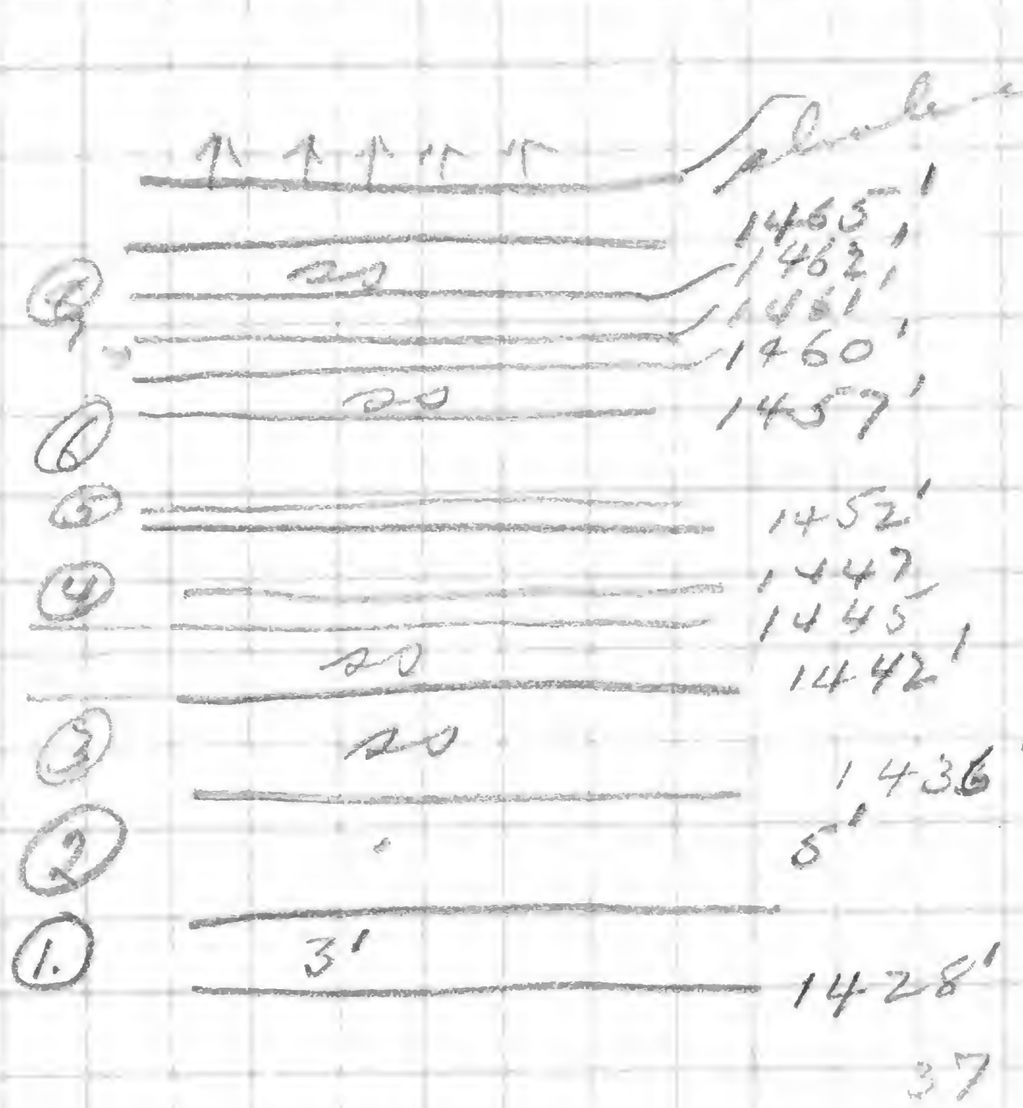
14' of shales are exposed above 1226'.
At 1230' a cascade has formed because of a slightly harder layer which is probably calcareous.
At 1260 a second falls is formed of hard sandy layers which terminate the first Gym + Eaton horizons.

At 1270 the new gym calcareous band with its numerous fossils is noted
S. perplanus (very large
M. concentrica
Spirifer
A. Princeps
S. has joints spaced only 9" to 1 foot the seam at 1270 strike N39E
this band forms is characterized by large Paleoyrods + Spirifers

1275' dark shales crumbling into small fragments fossils not abundant. These shales are found above the new Gym horizon at Dow Glen.

32

Section in the quarry on Swall
15 yds west of end of concretion bed



37

⑧ sand dark sh.
⑦ 1/2' limy band with S. perplana
⑥ thin-bedded ss. with concretions (cond)
⑤ Appearance of black sh. 2" at most
④ Thin-bedded ss.
③ next six ft show disappearance of black sh. thin bedded ss.
② next five feet show the same but no layers are thicker
① ss. with black shale beds and coatings on bedding planes.

Aug 20

Ravine at W. A. Martin's

9d B4 Road and stream intersect at at 1125'

1175' 8' of alternations, slabby sandstone and soft blue clays.

1186' 15-20' vertical of slabby ss in thin and thick beds representing the U. Quarry

Joints:- N26E

Some joints at 1197' measure N34E this set has determined the course of the brook which has lifted blocks to form a fairly deep channel. A secondary set sometimes formed N57W. Typical U. Quarry fossils and molds are noted in a small quarry at 1197'

1206' Exposure of thick 2' bed of hard ss above which rests 4' thin bedded ss exposed as a joint plane and these show large pockets where concretions formerly rested. Joints here are plistocently spaced about 15'
Trend N34E 90°
N34E 90°
In slab about typical Quarry fossils. Blue rock lined and for 10' above as the tonal fossil at Hamilton

82

1223' sand loses its prime character concretions small ball-like, joints uneven, closely spaced 15" – 12"
Joints set: — N35E.
Secondary " — Too poorly defined

1224
1225 blue-grey sandy sh. in which fossiliferous concretions are common. The grade of the stream is much less as the slope flattens suggesting approach of the Trimpfield bed

1235' hard impure limestone referred to that at Red Gate only 9" to a foot exposed. This rocks is the cause of the flat at this point. The stone shows a pitted weathering which is found only with the limestones. A bluff of this is noted in the stream bed was exactly 1' in thickness.

1238' blue shales of the same kind as at Carlisle. Joints N57W closely spaced. Fossils noted

P. decorus

1282' – sandy bed is succeeded by soft, slaty shales breaking into flat chips.

?

1310

28

1282

4

1251

1235

1223

1175

16 l
9b d6
9a A B 6

Ravine at Dunstan.

1147' 4' vertical of bleached crumbly arenaceous shales. These are at the Mesozoic boundary

1196 excavated, weathered and crumbly. Probably top of Mesozoic

1196 off the trail (?) slight breakpoints very flat. Elliptoliths in a loose soil. Fallen on the top of the hill 1201

1253' falls formed by a hard layer which caps the black shales. The black soft shales are 60-65' thick.

The layer forming the falls is 2' thick & calcareous. A very irregular fracture. On this rest crumbling shales but near the bottom column rested a 2" layer of hard pure lo. f. shale. On the flow bound contains quite friable for about 7 or 8 ft. & then becomes heavier bedded.

On the [illegible] bound (?)
2 fragments
2 large
2 [illegible]
These are the shales exposed at Randallsville
large at the base

LL

1303

1203' (50' above falls) excellent exposures of 15' vertical of clay shale with irregular fracture. Fossils and coarse.

These shales change at 1250' to a hard layer and 10' above this are thin, medially coarse in texture

At 1383' a small exposure of grey coarse shales.

1443 grey shaly sands.
1454' dry appearance of 50 feet horizontal 10' vertical of grey ss. splitting into flat slabs. Weathered to prominent layer to Kenny (Kenney) point IV 34 E

1159

9d A2

Aug 20.

ss. and shale of U. Quarry. Thin and slabby. Typical of U Quarry fossils. Close to the level of the Middle Fork exposures. About 1250'

About 100' above these are blue shales (see there) Diatoms echinoid.

6dB2

Aug. 20.
Ridgeley brook.

1160

along road

1171' Sandy shales with L. lamellosa
1187' Thin slabby, grey ss. splitting off layers ½" thick 3" vertical
1220'
1225–1241 U. Quarry rock
1265' a foot of hard limestone
1266' Blue shale with abundant Brachiopods

A. rectalaris
R. Vanuxemi
S. perplana
C. complanata
Parallelodon hamiltoniae
A. decussata
S. recurvus
L. lata
C. bottii
A. spiriferoides
F. cumulus
C. hamiltoniae
P. patulus.

U. Quarry rock surrounds the reservoir for the canal at 1220'. Quarry stone is formed up to level of 1225' where the limestone is met. Below reservoir are alternations of ss & dark sh. to end of gorge where the shale has red & grey bands.

9dA1 1308' N54W of 2nd lime. hard blue shales belonging to Corniferous horizon. Represents the local hardening

About half of the Hawaiian Is
the resulting maps are published
The features shown on these ma
groups—(1) water, including seas,
and other bodies of water; (2)
hills, valleys, and other features of
(works of man), such as towns,

City or village

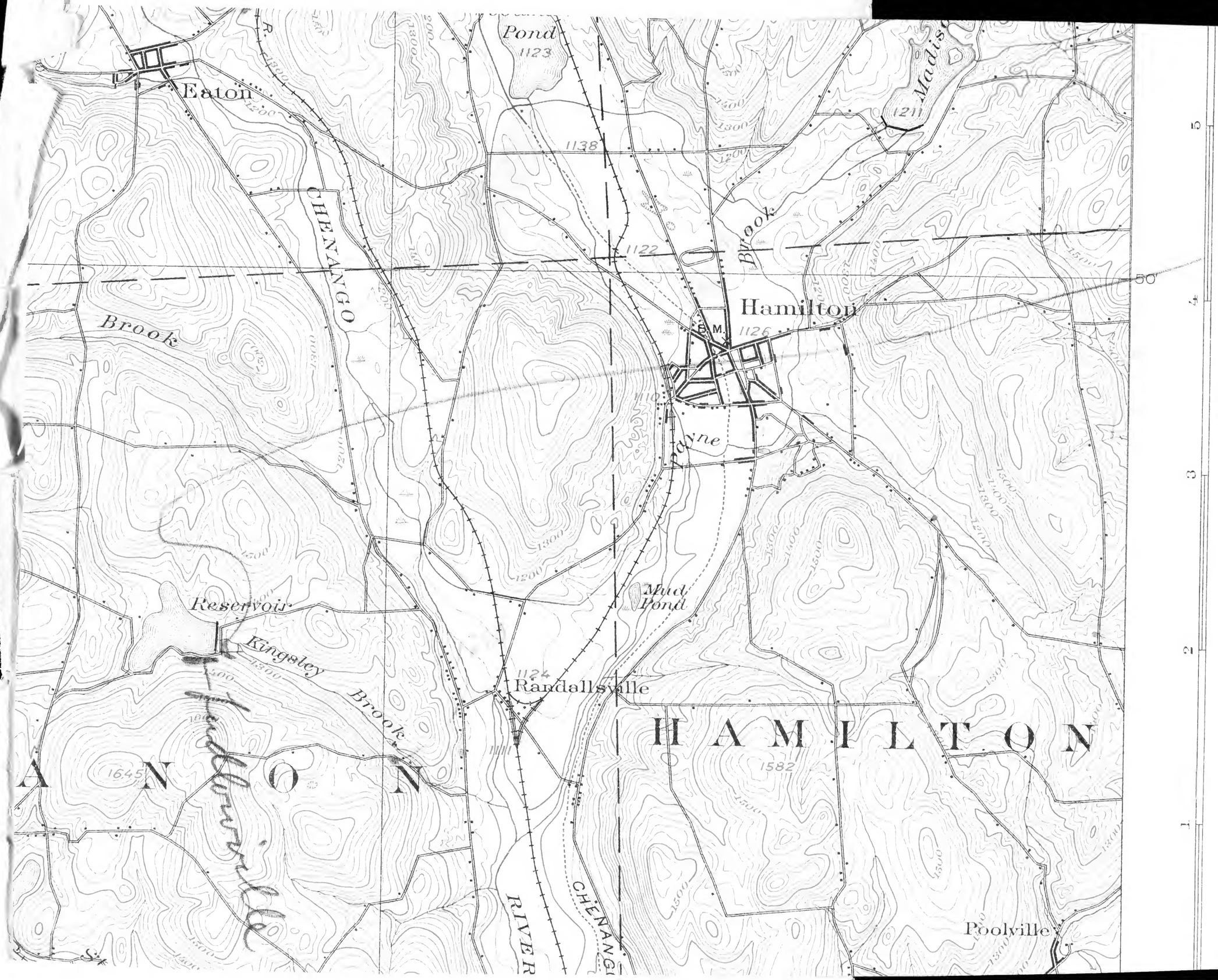
Roads and buildings

Dam Dam with lock

B.M. 1232

Bench mark
(Temporary bench mark shown by brass cross and blade figures without lettering.)

Cemeteries



Stone Mill about 1835 - Rhodes house to one side, house on Randallsville road about 1 rd north

1161

May 17

Tully SW of Smyrna

Vitulina present 1½' below base of Tully.

A. Basal bed - about 4" oolitic limestone passing into gray and limestone with corals 4".

B. Shaly ls with

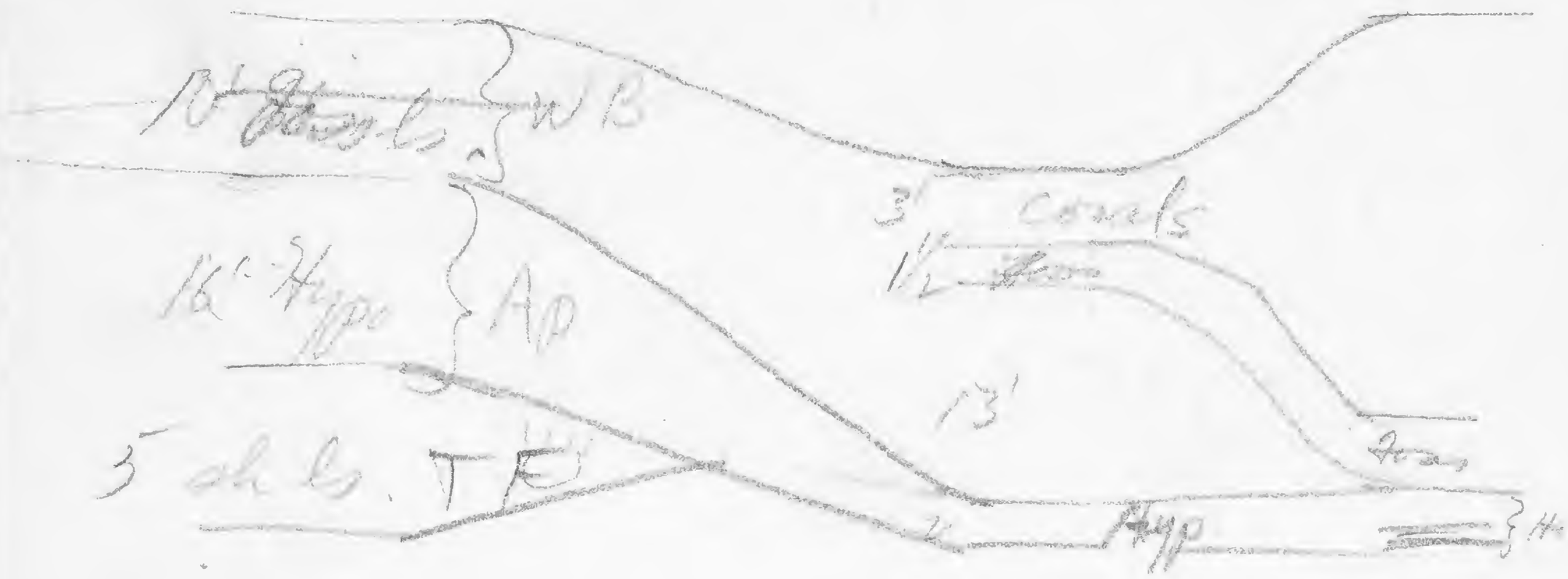
C Shaly ls. with corals (Syphoteca)

D - 3' of shaly and hard ls with fossils

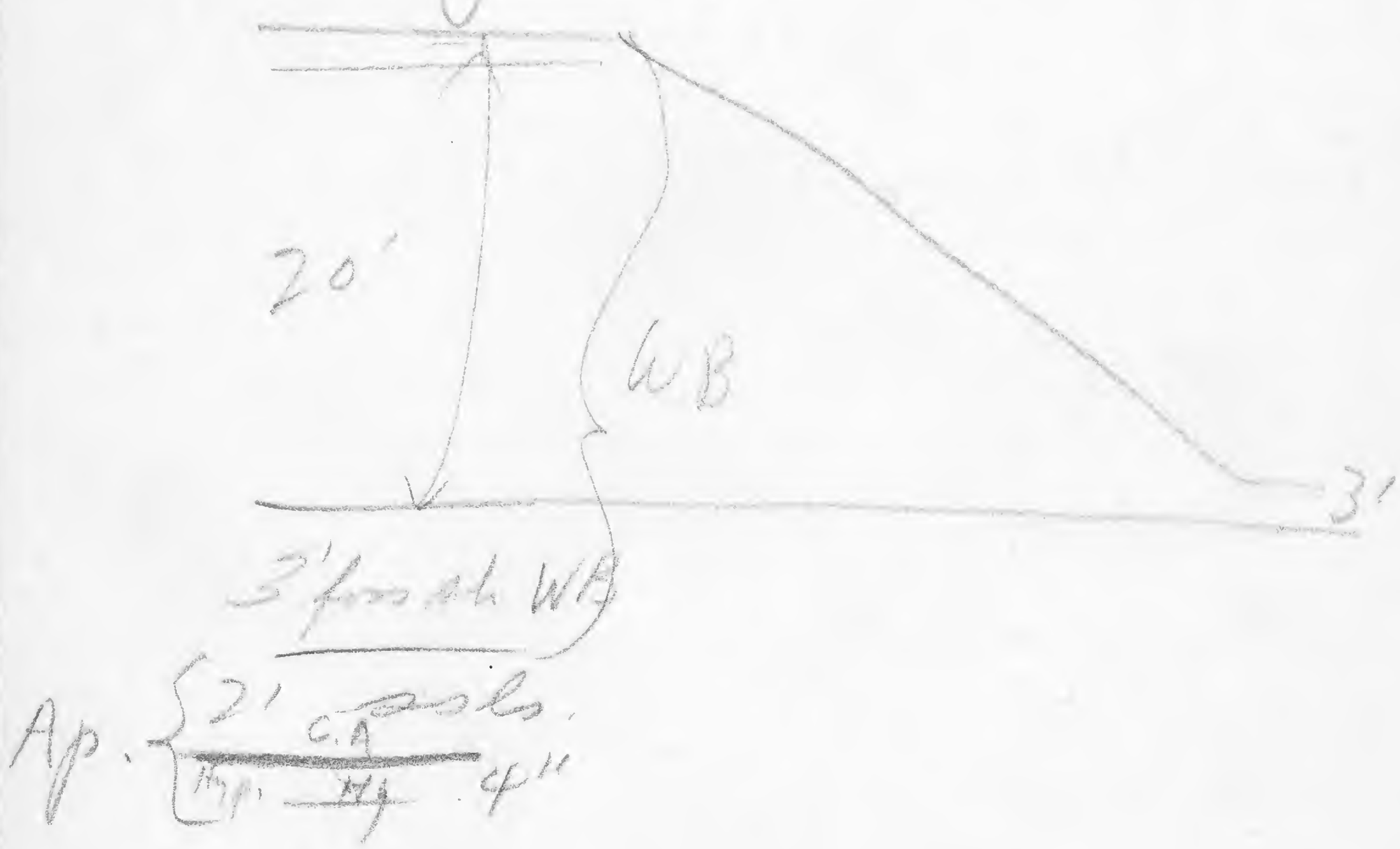
E. mostly shaly ss with a limy layer with small corals 2½ ft.

E 5'+	
D	2-3'
W.B.	Top is about 1345', bottom about 1325
C	9'+
B	1'
sandy ls	8"
4 oolite	

A.P. 2.



Paeyclas lirata



1162

July 4 collecting - all day

Lilly 1596. Wermers

15' Lowest layer of massive blue ls. containing S tulliemeis & H. cubrides. This layer is 1-1½' thick. Its lowest stone has a granular appearance above it becomes blue and ~~and~~ more grained

10'10" - 7 ft. a 4" band of hard blue ls. but above the stone ~~x~~ breaks into flat little slabs, but at 10" again the heavy blue stone is in evidence

15'15" - At 14' there is a band of shale which is argillaceous and ~~merely~~ about a ft thick with many bryozoa and small corals & brachiopods, also crinoid stems. Above & below are heavy ls bands, the upper one containing a leaf cephalopod.

+2' hard blue ls., then Tensleep contact.

Total thickness 15' + 1' + 2' + 3" = 18' 3"

Moscow is exposed from 1480 - up to about 1510 or 20'

18

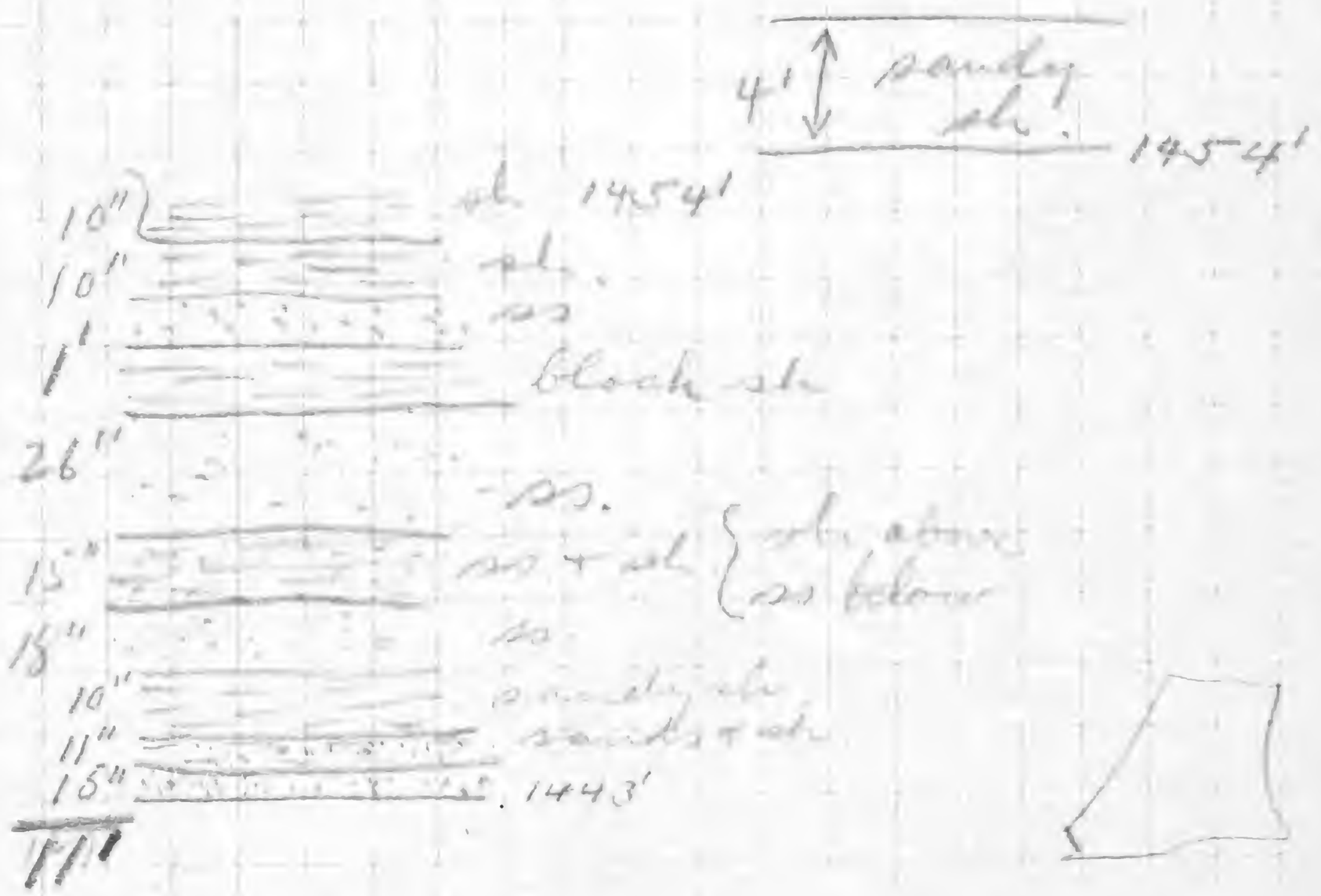
Sept. 3. 1 **1163**

Prairieville 1250' along creek and forming a cascade in brook blue to blue-grey shales with few fossils.

Spirifer
P. corbulifer
P. consticta
These are 12' thick here.

1443' vertical 554 W from road intersection and above lower shales, alternations of slabby ss and shales. Some of the ss are shale cyng lenses having many balls of clay in them, as flat slaty masses.

Fossils
Crinoid stems in shaly ss at 1450'



30
13
10
10
143

This represents transitionary beds with the U. Quarry Lingula?

44

1300' a small cascade of blue shales apparently fossiliferous.

C. terminata
H. debaya
leptena ?
N. lirata
C. congregata
N. bellistriata
O. carinata
I. carinatus
I. subcomagirata
P. sp. aginata
Lingula sp. f. delia in upright position
C. bellistriata
C. terminatus
S. chemungensis
Spiroplyla sp.
S. arcuata
D. constricta
Q. erectum
L. hamiltoniae

1310' a hard sandy band forms a flat at the road intersection with the stream.

1373' thin slaty ss. with grey color.

1374' grey shale, irregular fractured. Cr. congregata

1400 grey shale, purple weathering, S. penuata

Fossil zone with Stream

74

6

The hard ledge is at 1305' forming the top of the hill

1313' Blue shales weathering to purple color. They are comparatively soft and contain the peculiar contortions ascribed to Cephalopods by Miss Goldring. Foraminifera are common in this portion of the bed but other fossils are comparatively more rare and mostly Pelecypods.
At 1319' the rock is getting harder with more fossils. It appears when fresh as still blue but it soon becomes purple on weathering and is more compact, crumbling less readily

1325' The beds are still more massive

The interval 1325-1328 establishes the hard compact rock with hackly fracture, abundant large fossils. Also there are tubes of dark ~~clay~~ sandy clay running vertically in the beds. S. perplanum common

1328-1328½' sandy stone splitting in large slabs contrasting with the hackly rock below.

1328½'-1333' massive sandy shales

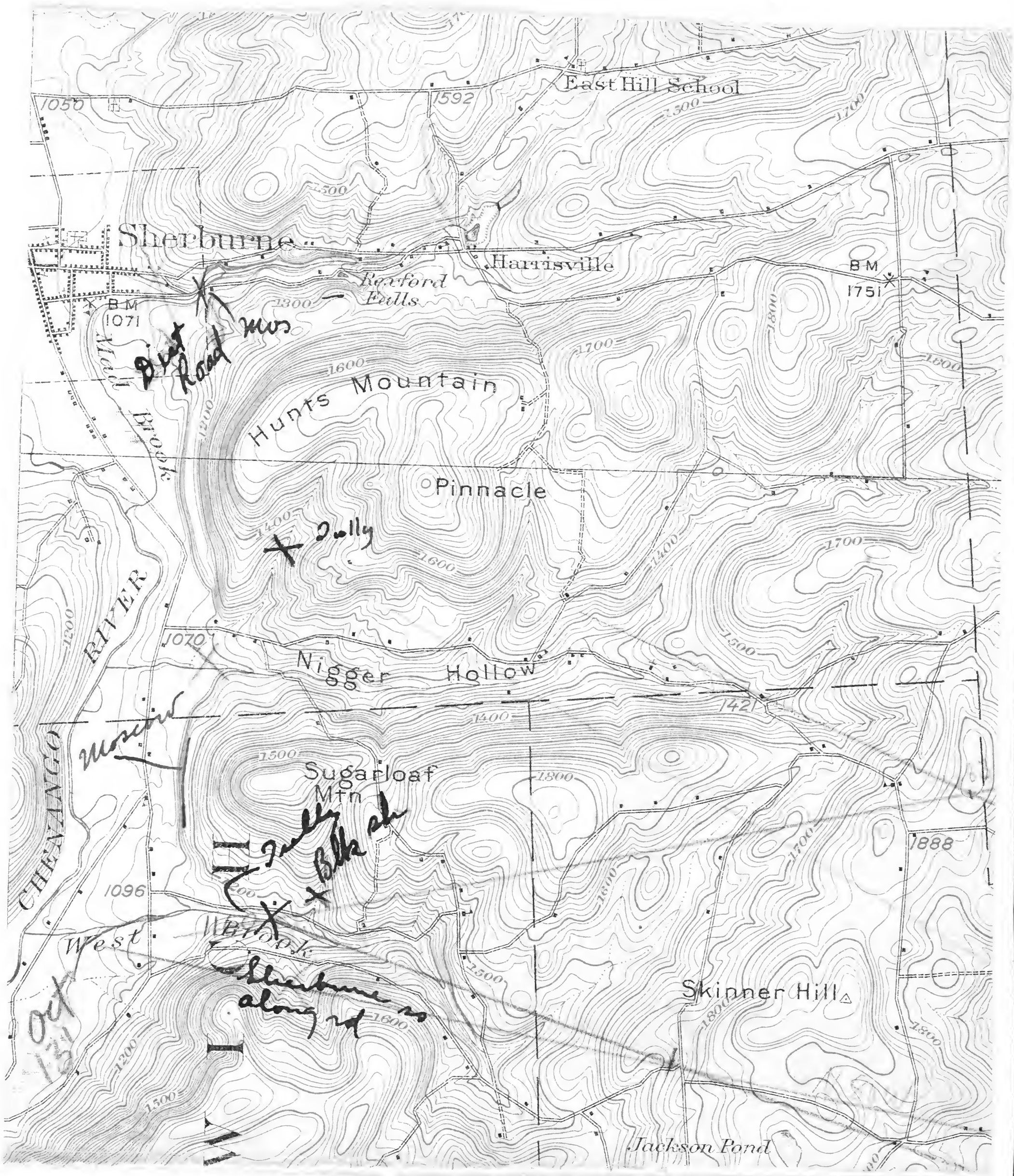
70

6

The fauna is necessarily homogeneous throughout the whole layer being least abundant in the top 1 foot below at 1313 and most abundant at 1320-1333'.

One set of joints is represented by slickenslides but are irregularly spaced from 2 to 5' apart. This set with smooth regular planes trends N34E and is nearly vertical. The second set trending N54W is very poorly developed and the planes have curved irregular surfaces not susceptible to measure

1166a


East Hill School
1050
1592
Sherburne
Harrisville
Bearford Falls
BM 1071
BM 1751
Hunts Mountain
Pinnacle
Nigger Hollow
Sugarloaf Mtn
CHENANGO RIVER
West Branch
Skinner Hill
Jackson Pond
1421
1888
1096
1070

Oct. 13.

Ravine on S. side of [illegible]

First rock outcropping at 1110' + 70' 20" or 1186' A.T. This rock is only in a small patch and cannot be collected

1186' — 1191' 5" — same
1191' 5" — 1196' 10" — a small cascade over sandy [illegible] that is hard. On the [illegible] sandy shales.

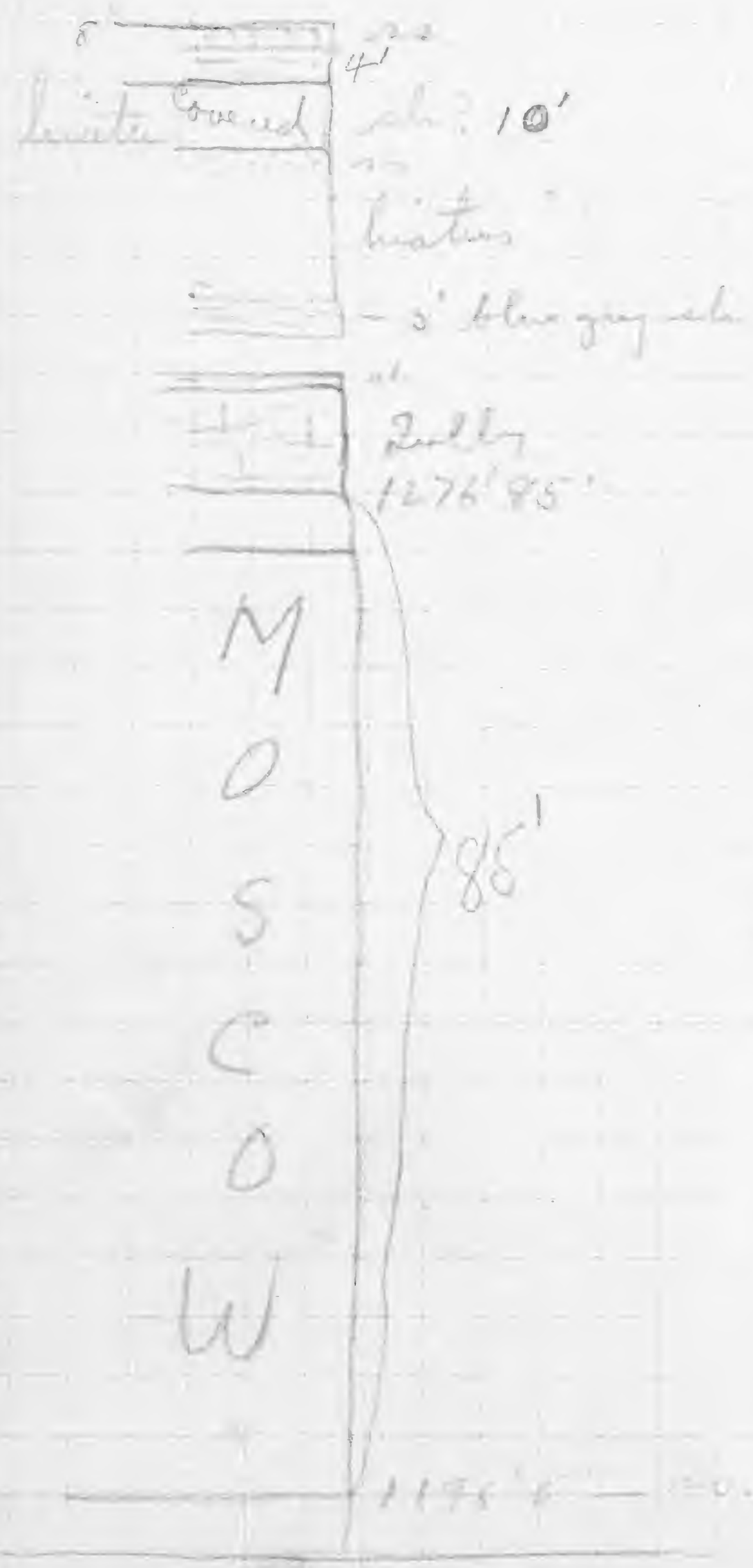
1196' 10" — 1206' 20" — sandy shale. [illegible] [illegible] [illegible]
[illegible] L. laura
S. [illegible]
A. [illegible]
C. [illegible]
These rocks are quite sandy in places but in general preserve the blue gray color characteristic of the Moscow rocks.

1233
1186
47

1206' 20" — 1216' 30" — These rocks are very difficult to collect and seem to [illegible] few fossils. The L. laura was found just below this so at 1186'.

1216' 30" — 1226' 40" — sandy shales [illegible] quite unfossiliferous. A sandy slab at about 1227' [illegible] the mould of a cup coral [illegible] [illegible]. It may be out of place.

1226' 40" — 1231' 45" — same.


4'
10'
heaters
3' blue gray
Dolly
1276'85'
M
O
S
C
O
W
198'
1276
4
1245
1283
1245
38
38
11
42
96
5'

1231'40" — 1241'50" — The shales are considerably softer but still quite argillaceous. Fossils here are:

V. pristeloxa — S. permutata
P. discoidalis — S. stellata
G. agnifrons — C. vertigrus
R. vaccinifrons — R. convolutus

There are about 5' of these shales exposed here, from this point from 1236-1241

1241'50" — 1246'55" — same as above only all fossils are very abundant

V. pristeloxa — C. stellata
V. [illegible] — V. [illegible]
V. [illegible] — V. [illegible]
V. stellata — V. [illegible]

The V. stellata appear to be limited to the horizon 1241'50" to some point about 1245 of shales just above this horizon and I was able to find S. permutata from the middle 2' of the 25' of shale and the top of the shale. Fossils are very abundant and the top of the shale seems to have more.

1246'55" — 1266'75" — same

1266'75" — 1271'80" — Gradually with second appearance of S. permutata and disappearance of C. vertigrus. The shale becomes harder toward the top of the exposure

1271' 8" – 1276' 8 5" – The first 4½' of this interval are partly exposed so with 8 feet water this leaves 8 of a solid layer 5 ft. thick. Characterized by its fluted surface in the stream bed. The rock in the stone is blue grey with a crinoid remains in it. Its elevation is 1282' A.T. The bottom layer is nearly a foot thick (?) and has a typical lag-weathering. Fossils in this layer are very rare, only an occasional very small cup coral being observed. The next layer are flaky with some heavy masses of shaly ls. at about 5' 5" ~~feet~~ above the base and for a foot below the level of 5' the rock is a shale and has specimens of Gt. hamiltonensis, Jonesteltids &c, P. rana, a. spinosa. On a level 2½' higher at 7½' below 5' 5" was found Sicentolum. The shales and the beds with Gt. hamiltonensis are fully equal of Bergetown. The appearance of the Jolly shales above the layer with fluted surface is a strong proof of the Jolly.

Shales with corals can be found up to 5' above the 5' 5" level. Thus the Jolly here would be 10' 5" thick.

On the Jolly come soft shales that break into slabs which have every appearance of the Genesee

except the black color. They are more alive

6' above Tully is exposed about 3' of shale that breaks into the plates. They are blue gray in color & are probably Pleurodictyum.

Above 11' of hidden follows the exposure of the first appearance of ss. which has an irregular fracture.

14' above these we see a prominent ledge an 8" ledge of ss. Below these ledges are rather soft shales.

This course was followed as further

70

91

Oct. 13'

[illegible] Brook

First [illegible] at [illegible] 1095' A.T.

1098' — 1142' 45" hiatus

[illegible]

1142' 45" A.T.

[illegible] of [illegible]

√ S. tullius c — [illegible]
√ S. [illegible] c — S. [illegible] gensis
√ T. carinatus rc — C. sct[illegible]
√ [illegible] — [illegible]
√ P. [illegible] — [illegible]
√ [illegible]

1142' 45" — 1148' 55" [illegible]
T. [illegible], [illegible]

1148' 55" — [illegible] — [illegible]
[illegible]

11[illegible] 158 — [illegible]
of the [illegible]

11[illegible] 1 [illegible] 1168' [illegible]
The follow[illegible] about 10' higher [illegible]
[illegible]

Tully on top of falls — base at 1168' A.T. — Bottom layer oolite 4" ~~thick~~ thick, then about 12' — 15' mostly stone fragments, then 3-6" shaly b. (?), 1" of black S, 2½ of very fossiliferous shale, dipping 2" of black very light grey b. ⁄ The so-called the top of the Tully on Genesee ripples in it with a strike of NW-SE ⁄. On the so-called hundred b.

The 2½ of shale I consider complete with a similar blue shale noted about 20' up in the Tully in the ravine at Georgetown where it is at 1144' A.T. also rd W cross Tully, which, according to my recollection it is only a few inches thick. On the shale is one inch or two of hard light grey b. with abundant Orthoceras, fish, crushed crinoids, Platyceras & small corals. This bed should complete with the 4 or 5" layer with abundant Platyceras & small corals in the Georgetown ravine. Include the whole Tully here between 5'6" — 6'.

On the Tully is a black shale, which above for two or 3' seems somewhat limy, then the shale breaks into small chips on exposure and is quite like the typical Genesee except for color. Prof. Whitnall thinks that the first 2 or 3' of the Tully, perhaps more of the shales are Tully. We found dark shales for at least 52'?

52' or more, from top of Tully up to 20' up in the first ravine of the north Skaneateles and found for more than 50' in the

My barometer reading in this morning does not accord with the map. The fellow is just west of the farmhouse perhaps 120' or less and this would make the exposure according to the topography at 1157' A.T.

The Viteline zone must be below the rock exposed here.

West Brook
Nov 14.

1 Oolite – 4½" thick – [illegible]

7 Cuttel [illegible]

[illegible]

3 – 15" – [illegible]

[illegible] – split [illegible]

4 – 33" Blue shale – very [illegible]

5' – 1½" [illegible]

?

4" [illegible]

33" [illegible]

16' ? lb

15° ~~20~~ ?

[illegible]

41" [illegible]

6. — 4" light gray to pink Epidotic Polygenic, limy Lapilli, Pseudotuff, etc.

7 — 2" — calcareous silt [illegible]
to black shale.

8 — black fragile shale — very fissile
[illegible] of gritty

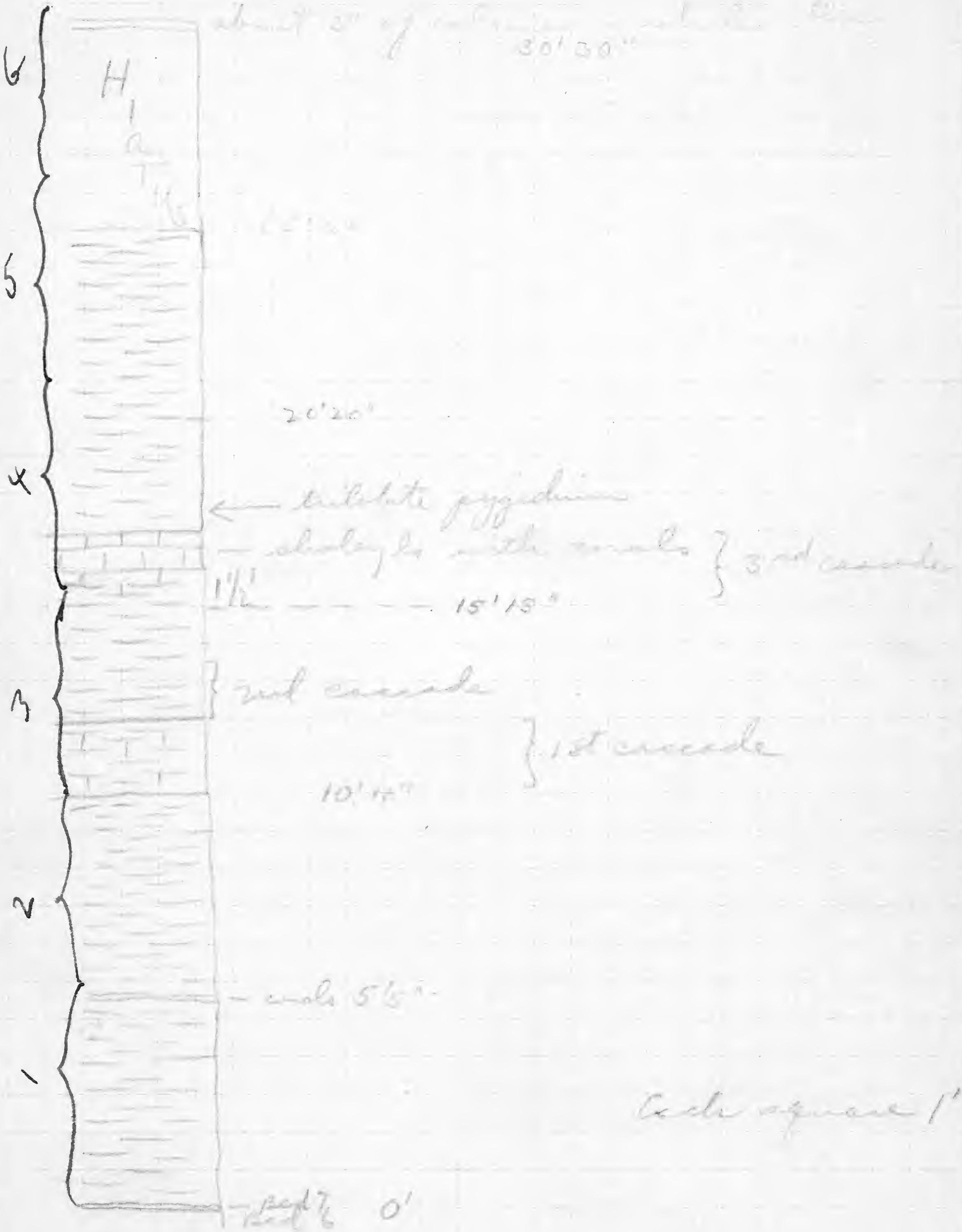
All measurements here from top of Bed 6.

1st 5'5" — mostly dark blue gray shale that weathers in patches (bentoff) to a light gray. Probably a hydrolization of $CaCO_3$ accounts for the lighter beds. Sun places the shale peels off like the Henderson city rotted slabs. Large slabs have the curved surfaces characteristic of strong shale. In places it is gritty. At the top of this interval a few small coquils were found. When the shale is calcareous and a little more resistant

2nd 5'5" — similar shale with occasional thin beds of ss. and lr. The shales weather to a light olive. No fossils were observed in this interval

3rd. 5'5" — calcareous, blue-gray shale that weathers to an olive or brown color — I observed no fossils. This interval includes two low cascades, the lowest of 1½'-2' — the upper of about 1½'. There are about 2' of the shales that weather olive and then comprise the first cascade — that is
[illegible] above the 2nd

Beds 2 + 3 [illegible] both give [illegible]
[illegible]
[illegible]
[illegible]


6
5
4
3
2
1
30' 30"
20' 20"
15' 15"
10' 10"
5' 5"
0'
3rd cascade
2nd cascade
1st cascade
each square 1'

b. horizon. This shale of the first cascade is rather lumpy in fracture. It forms the very bottom of the 3rd step and rest on a blue gray shale that breaks into chips. Nothing was the only fossil observed in these. This shale seems to be quite sandy. On this comes a blue gray shale in the streambed which has been worn smooth. The shale contains irregular brown patches, usually not more than 1/16" - 1/8" thick composed of sand. This stone continues to about 1' up in the next and 4th step, where a 2½-3' cascade may be seen behind the second dwelling in the south side of the Pathway just south of where the side gully crosses the road. This cascade is formed by a compact layer of shaley ls about 1' thick?

4th & 5th step. The remainder of this step for about 3' is calcareous shale in which were seen wood, Zaphrentis, a trilobite Pygidium and the living shadder of a Cephalopod.

In the fifth step the rock is softer, lis calcareous & has Zaphrentis and so patches like those below

11th step.

10

10th step

10th

9th step

9th

9

8th step

8th

9

9

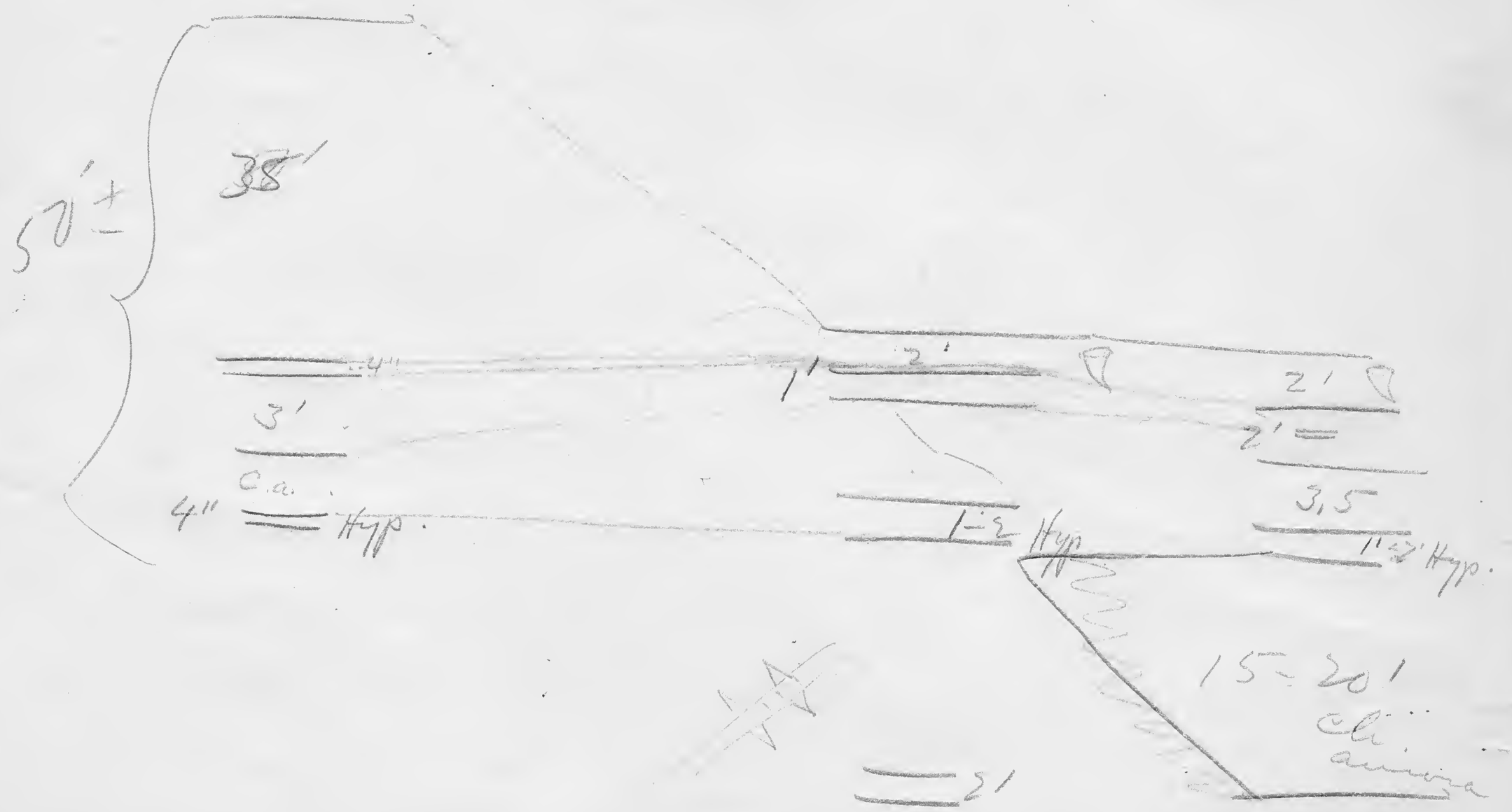
7th step

Hol 8

6th step — limestone exists at top
7th step — limestone for about 3' at bottom, but above, fissile shales with a brownish white streak. These are much different from those below which show the fissure irregular & rather thick. But these shales break into thin flakes. A graywacke was found in the 8th step — a 3' ft. stratum of fissile sh.
The 9th step has some shale with strip of limestone. The shale appears to be blue-gray.
The 10th-11th steps predominantly contain thick beds of fine grained ss. that split with a curved fracture. This is probably where the Shelbourne comes in.

The brook was walked up to the 16th step above the top of the Gully and only ss of the Shelbourne were observed. Therefore the Shelbourne comes in at about 1220-1225' A.T. by hand-level it comes in at 1234'. Beyond the 16th step not a single exposure of fissile sh was noted.

440 paces from bottom of Shelbourne to top of 3rd cascade.
39 paces to 2nd cascade.
36 " " 1st "
The first cascade is located exactly at the union of West Brk. with the first side gully on the north side going east



2

55'55"

50'50" 10-11

45'45" 9-10

40'40" 8-9

35'35" 7-8

30'30" 7

25'25" 6

20'20" 5

15'15" 4

10'10" 3

5'5" 2

1 Blue sh

13'

35'35"

31'

3"

6'

21'

6'

Covered

Covered

27'

Dilobit pygid.

48

50
4
54'

Blue sh

Blue sh

Same

Blue sh

6"

33"

15"

15"

4½"

1163'60"

1158'60"

1153'55"

1148'50"

1143'45"

1140'45"

12 3'5
1168
(6-7)

1168

16
5
3

1140
4
1144

1168
1147
21

Dolly South Lebanon 1612'

5'15" — 1st heavy bed of 1¾' – 2' in thickness contains Hypothyris and many Dolly-Mos. contact & pebbles & other specimens. However Hamulus was found among these. 3'5" from base is a shale band about 4" thick, then ls. and more shale, but this time calcareous shale.

10'10" mostly all round about a foot at bottom was ls. and at top is shaly ls breaking into slabs.

15'15" Dolly ls. Bed is not shaly only exposed at the top.

20'20" Same mostly round but in middle a foot or so of shale so at 20'20 is band of shale with fossils. On this is a 4–6" layer of hard ls with coral cepha, Platyceras etc.

25'25" — 1½' mostly hard ls. The bed is shale. However nodules of ls. of this bed contain fossils.

Total thickness = 25' 7"

27'1'6"
25'7" Some of stone at contact is shaly with bristles of crinoidal ls.

27

July 3 – Collecting all day

1 mile N of Georgetown

Fully

The first 5' consist of ls. hard, bedded bottom, [illegible] with 2' thick layer U. cubis found, not abundant, however, the bottom layer also U. parvula. Pecten, S. Stellatus also found. The last 2' is sandy L.V. clay, probably belonging to the Pleasanton. Patch the back & cut the stone in hand — and above the 2' thick bed the bass are thinner 9" – 4". At 5' a shale band was found with many small corals. The corals were found in the top of the 2' layer. In the shale band corals also found B. lede and Syringopora replete by Cyphoeus.

10' – 10" Thickness 5' 5" Conformable up of clay ls. shale and falling to fragments with a blast of the hammer. Top of the mass is a clay. Fine ls but this is subordinate bed. The clay ls. weathers with the same pitted or pocketed character as the same horizon below. Few specimens of fossils have been in the weathered surfaces here. Corals common lowest layers.

15' 15" ls. decidedly [illegible] in appearance but mostly like that below

20' 20" – mostly covered, but appears layers of sh. & ls. have yielded most of long fossils Platycrinids, Cyphoeus, etc.

25' 25" – ls and there are no known Thickness 25' + 2' = 27' 1"

Finally measured 30'

1

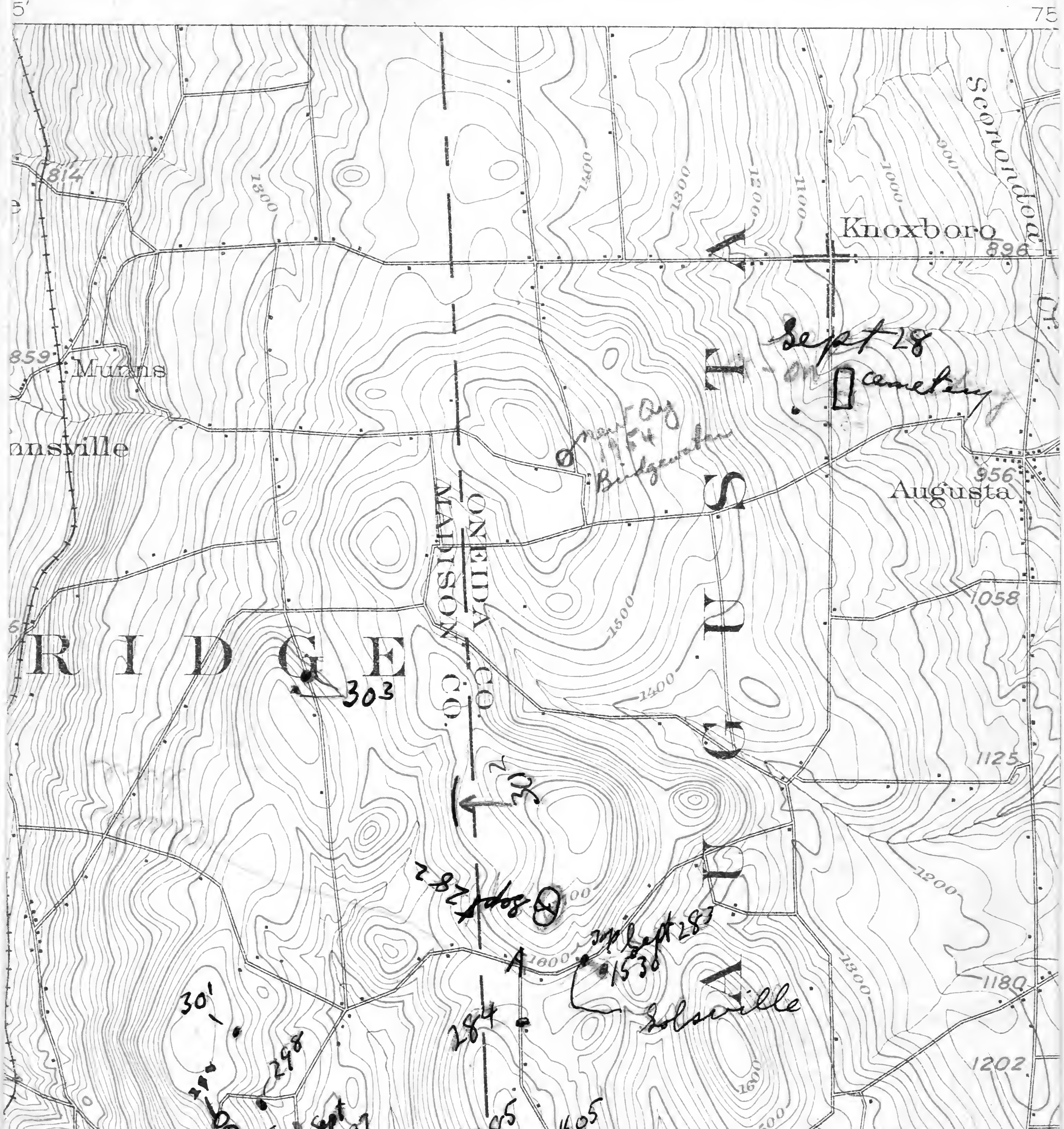
1310
8
1318

1318
1310
108
60
168

1931

1182/7

NEW YORK
MORRISVILLE QUADRANGLE



3

4

Sept 28' - Knoxboro - Checked Root's elevation on top of Oriskany at about 1288 (16 hand level steps) - This locality is opposite cemetery, not shown on map.

A little S along the road I saw no Oriskany but I believe the base of the Onondaga is on a small knoll at the second corner from the gully or at 1180'

Sept 28 - Small quarry in Delphi 38' below top of hill at about 1712'. Top of hill is coarse Delphi. Shale of 10' quarry lumpy with small Spirifer, Trypidocyphus, Bucania, Leperditia. This is apparently the Leperditia zone. The top of the Mottville is 16' lower at about 1698', I guess top of hill at 1750.

Sept. 28 small quarry in Solsville between 2nd & 3rd houses from corner A. at about 1530' Dies Sp is near the bottom bed; O. cornuta, Leperditia, Chonetes. The top of the Solsville forms a ridge just under the 2nd house from corner A. at an elevation of about 1570 ~~1575~~. Second house is G. S. Palmer's and sits on an eminence of the Solsville

284 Upper Amboceelia beds of Bekspart

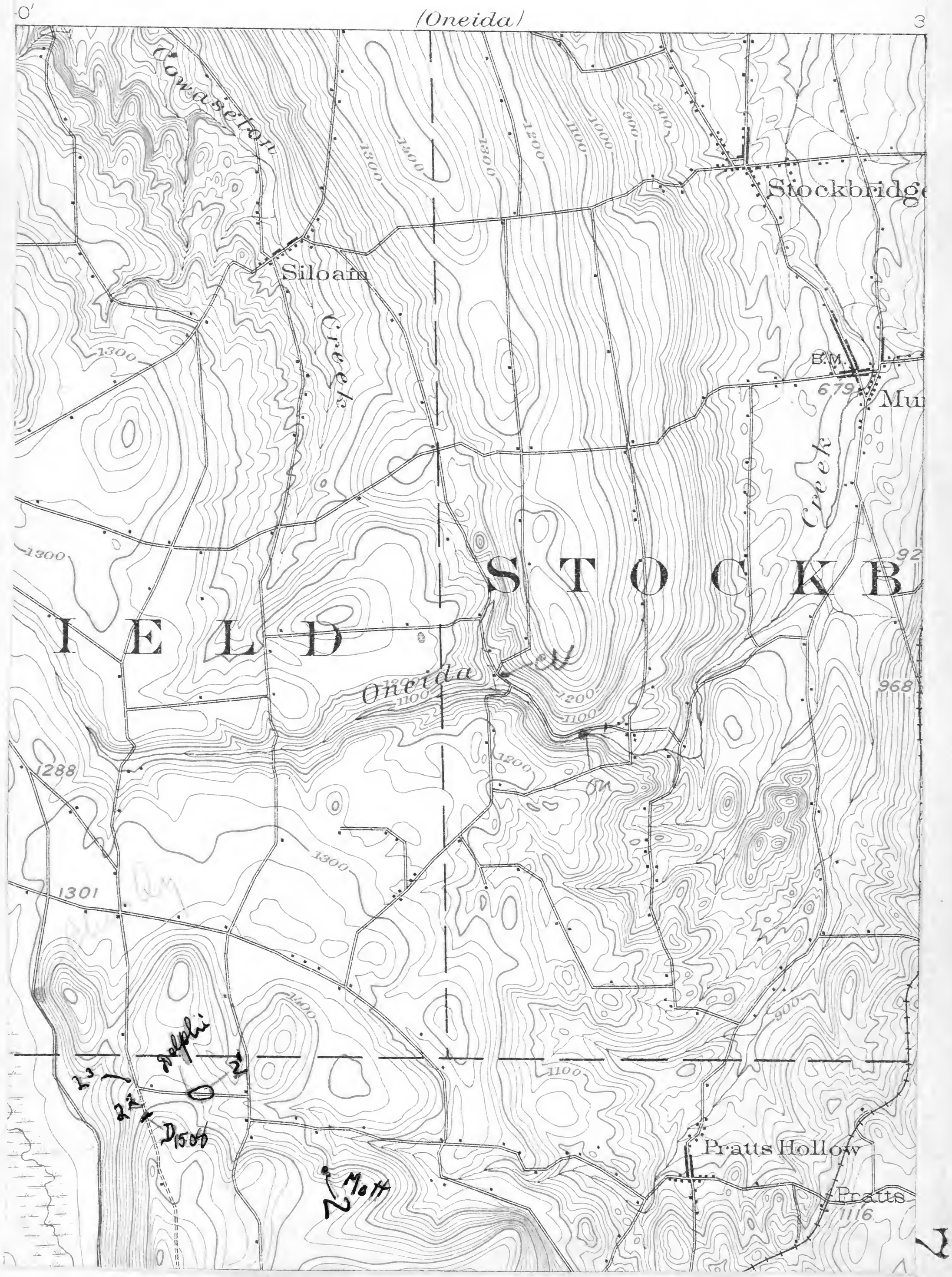
Sept 28 5 - Mottville - top about 1605'

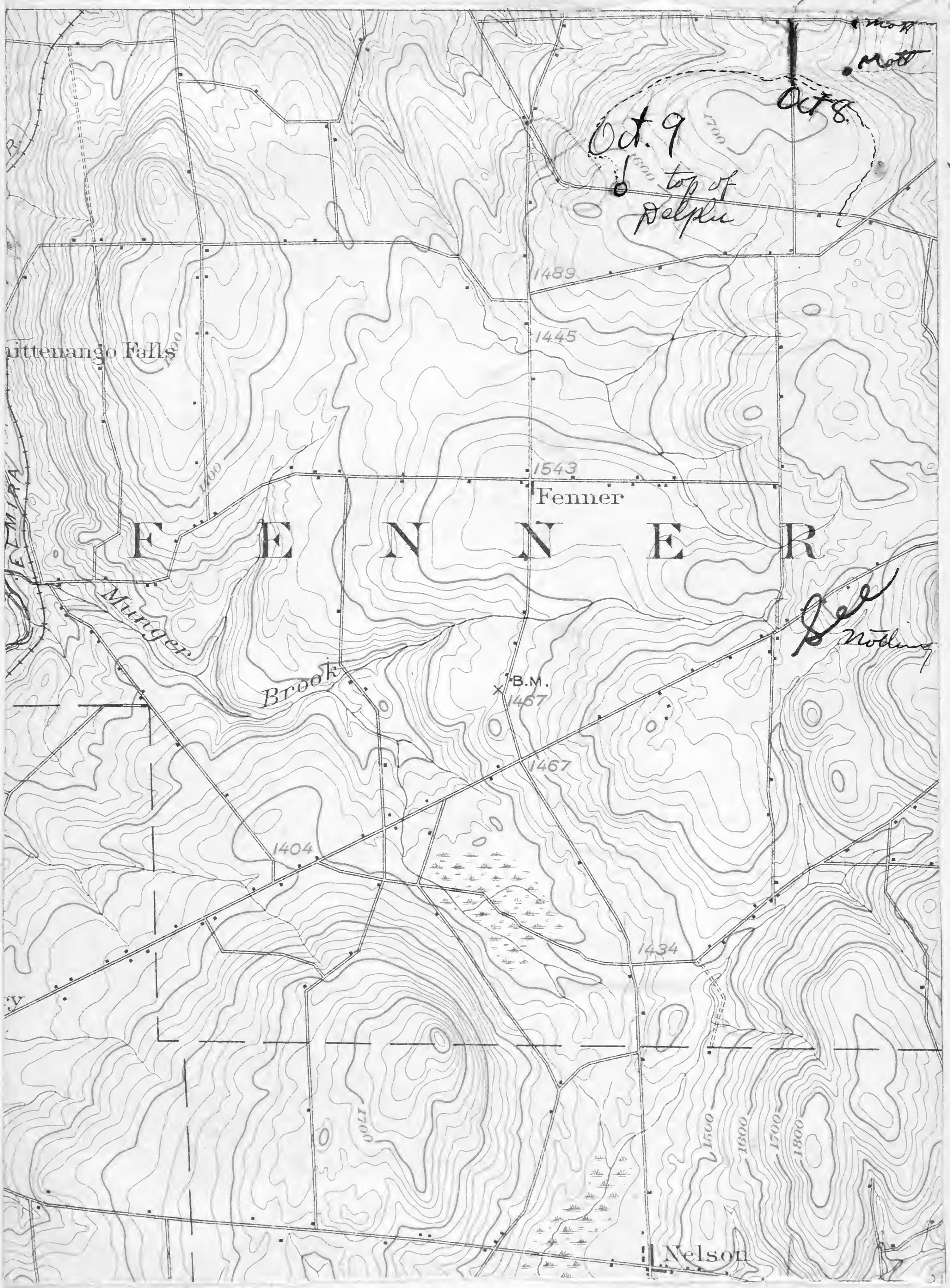
28 6 - Top of Solsville at 1400 - Leaorinus abundant.

C7

Onondaga - Marcellus contact 0.2 mile W of X-Roads

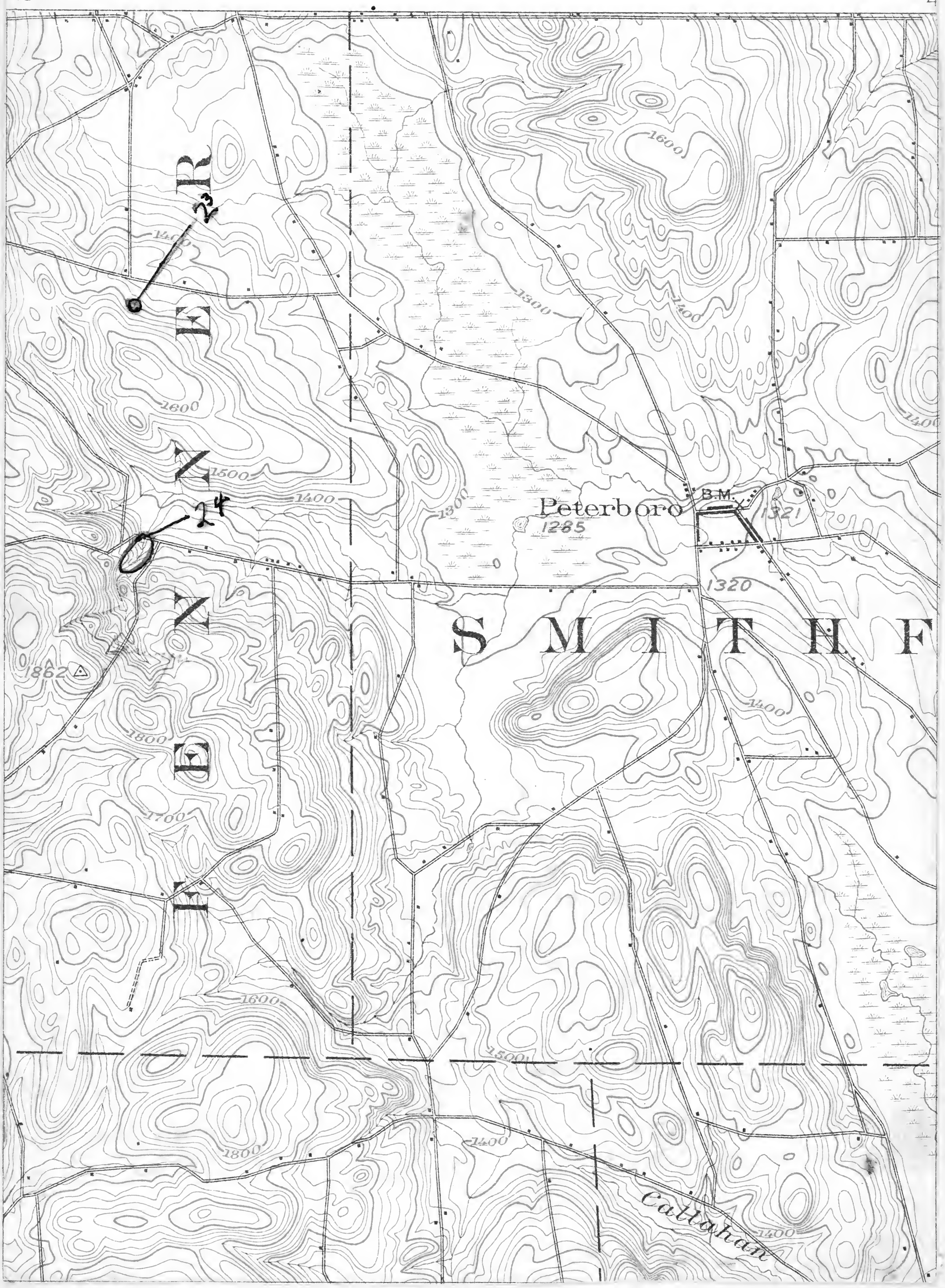
1184 F




Oct. 9
top of Delphi
Oct 8
Mott
1489
1445
1543
Fenner
F E N N E R
Munger
Brook
B.M.
1467
1467
1404
1434
Nelson
1500
1600
1700
1800
1700
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0

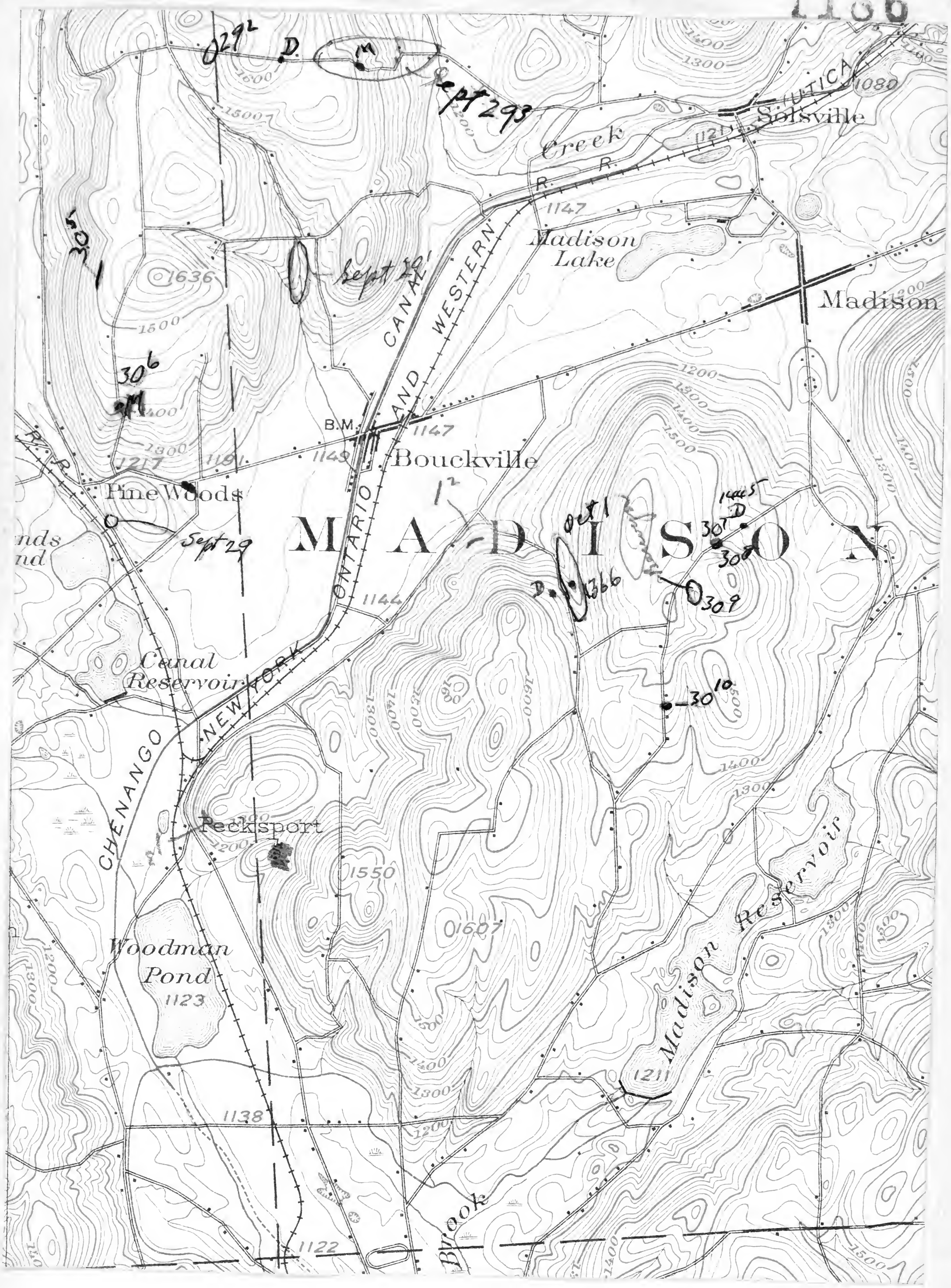
2.5
70
175.0
1480
1655

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

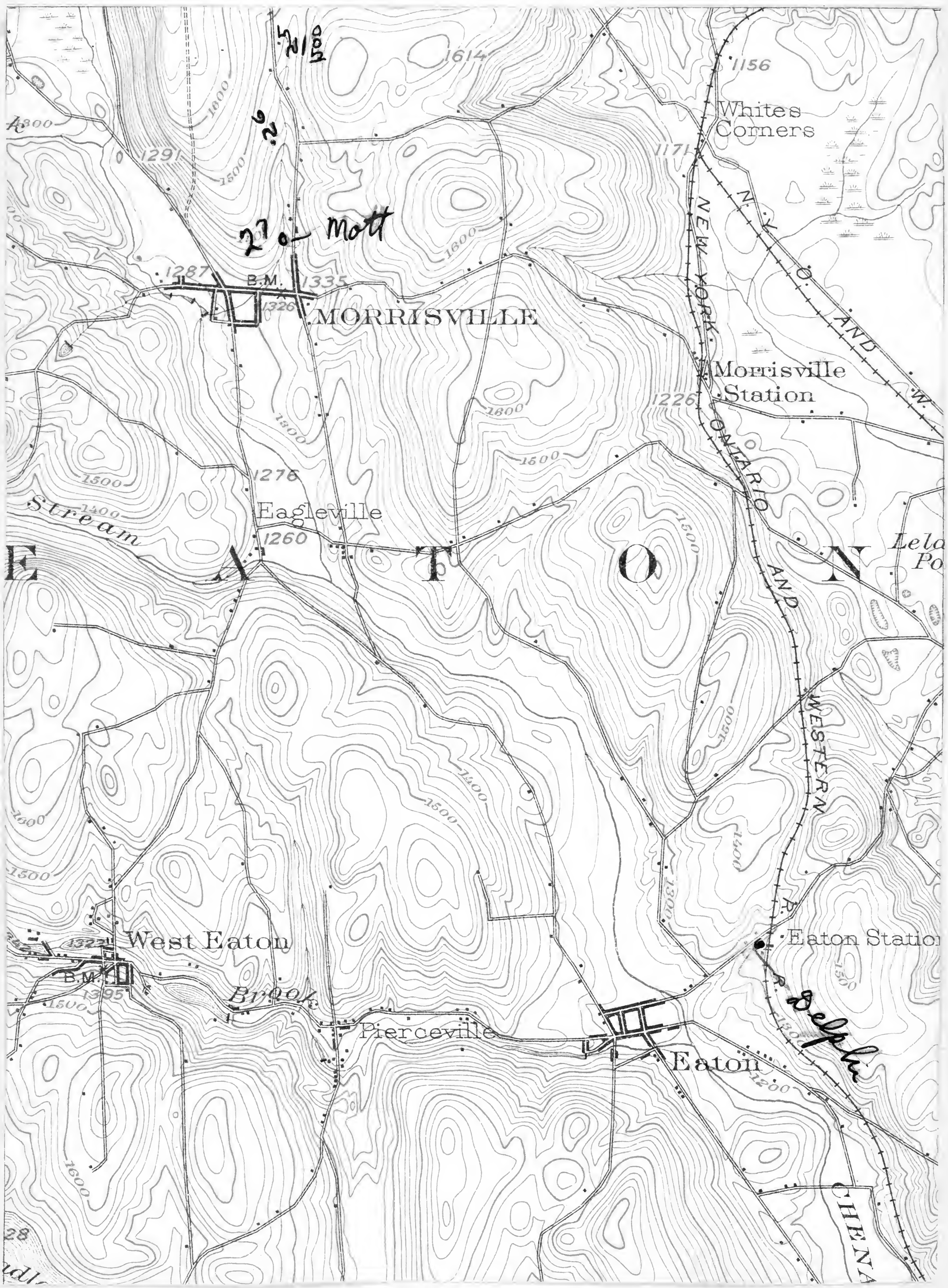


See R29

1186

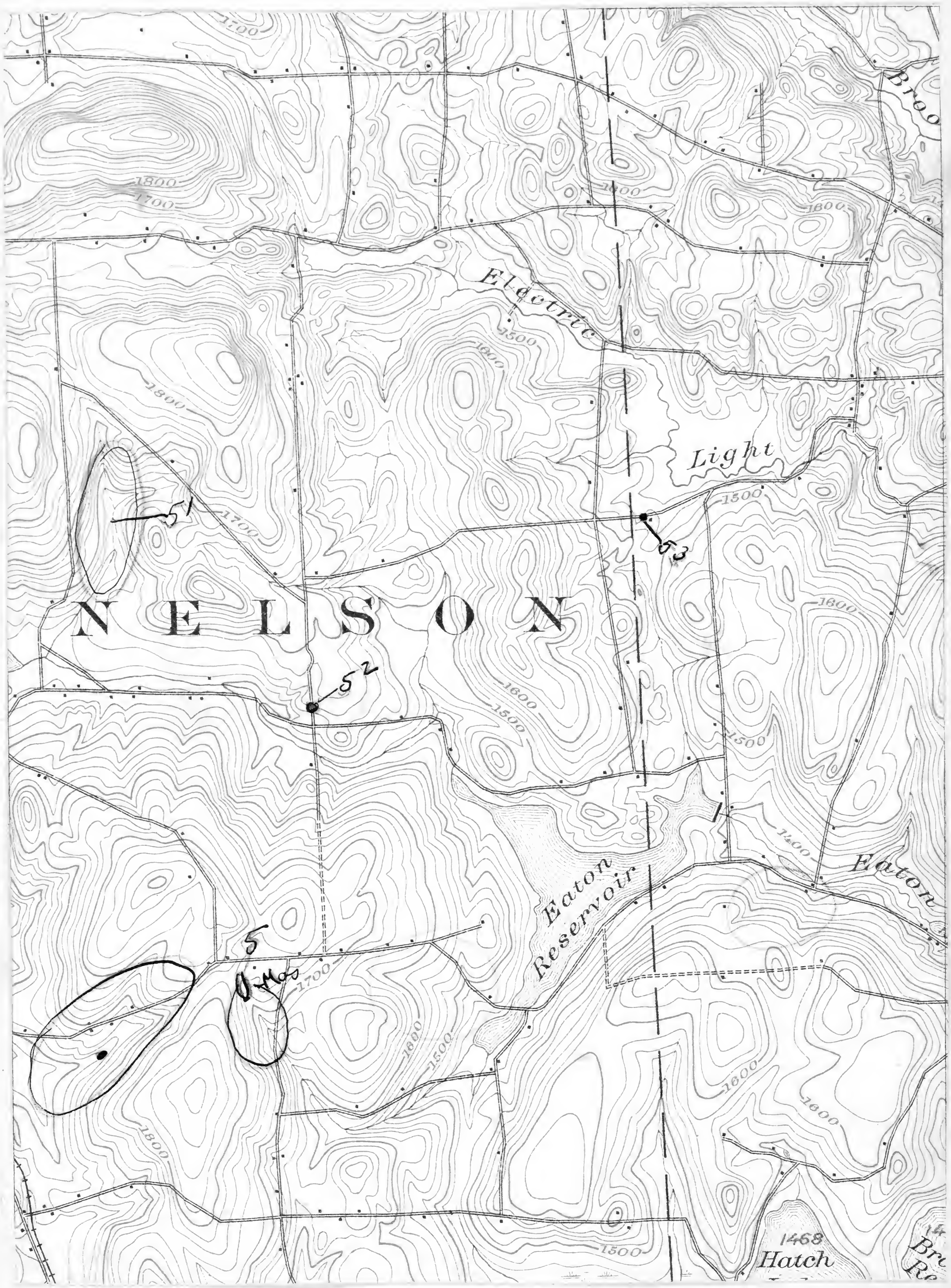

UTICA
Solsville
Creek
Madison Lake
WESTERN
CANAL
Madison
ONTARIO
AND
B.M.
Bouckville
Pine Woods
MADISON
Canal Reservoir
NEW YORK
CHENANGO
Peckspoft
Woodman Pond
Madison Reservoir
Brook

1187 F

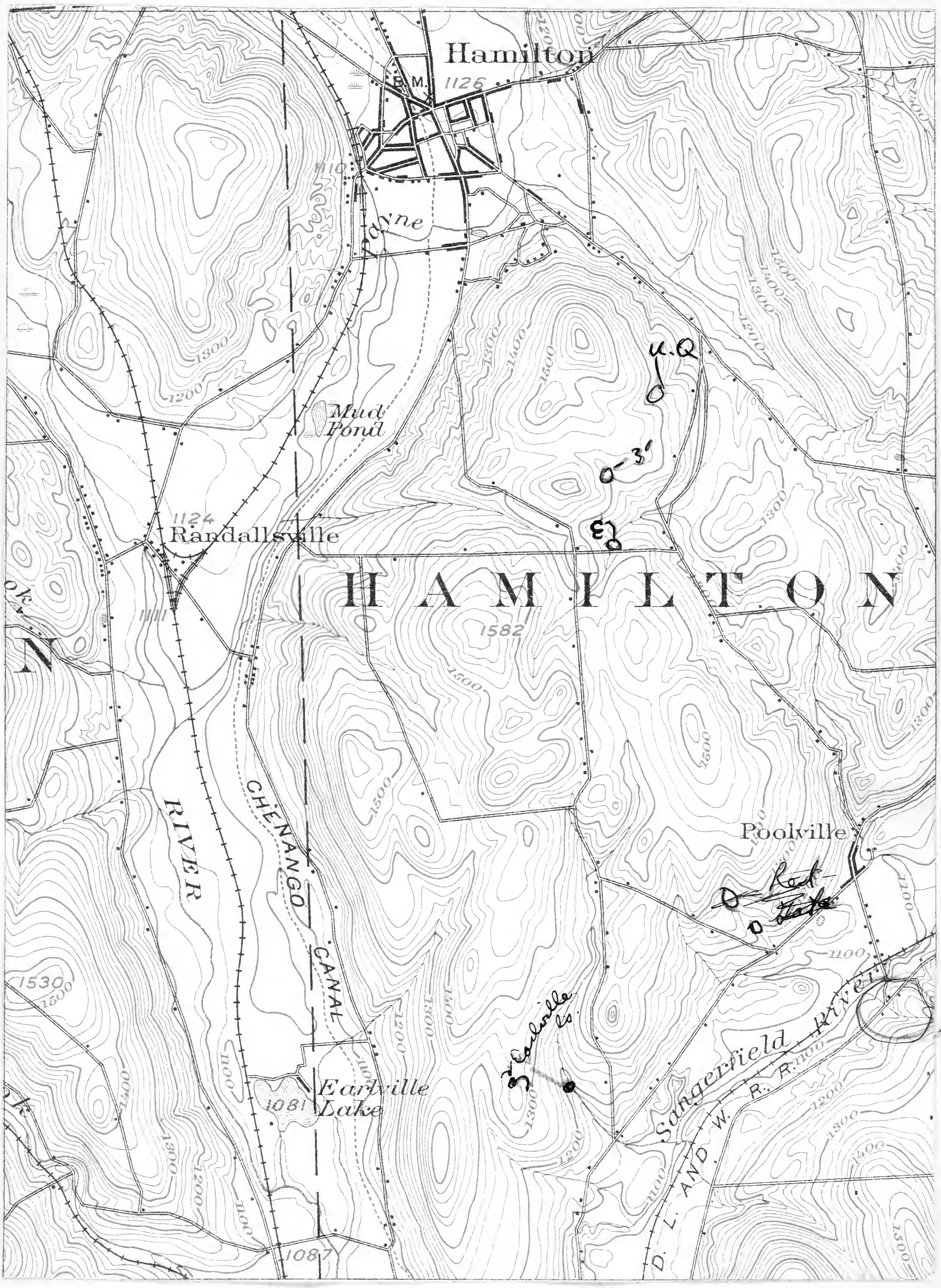

Whites Corners
MORRISVILLE
Morrisville Station
NEW YORK ONTARIO AND WESTERN
N. Y. O. AND W.
Eagleville
Stream
E A T O N
West Eaton
Brook
Pierceville
Eaton
Eaton Station
CHENA
Delphi
Mott
B.M.
1614
1156
1171
1291
1287
1335
1326
1226
1276
1260
1395
1600
1500
1400
1300
1200

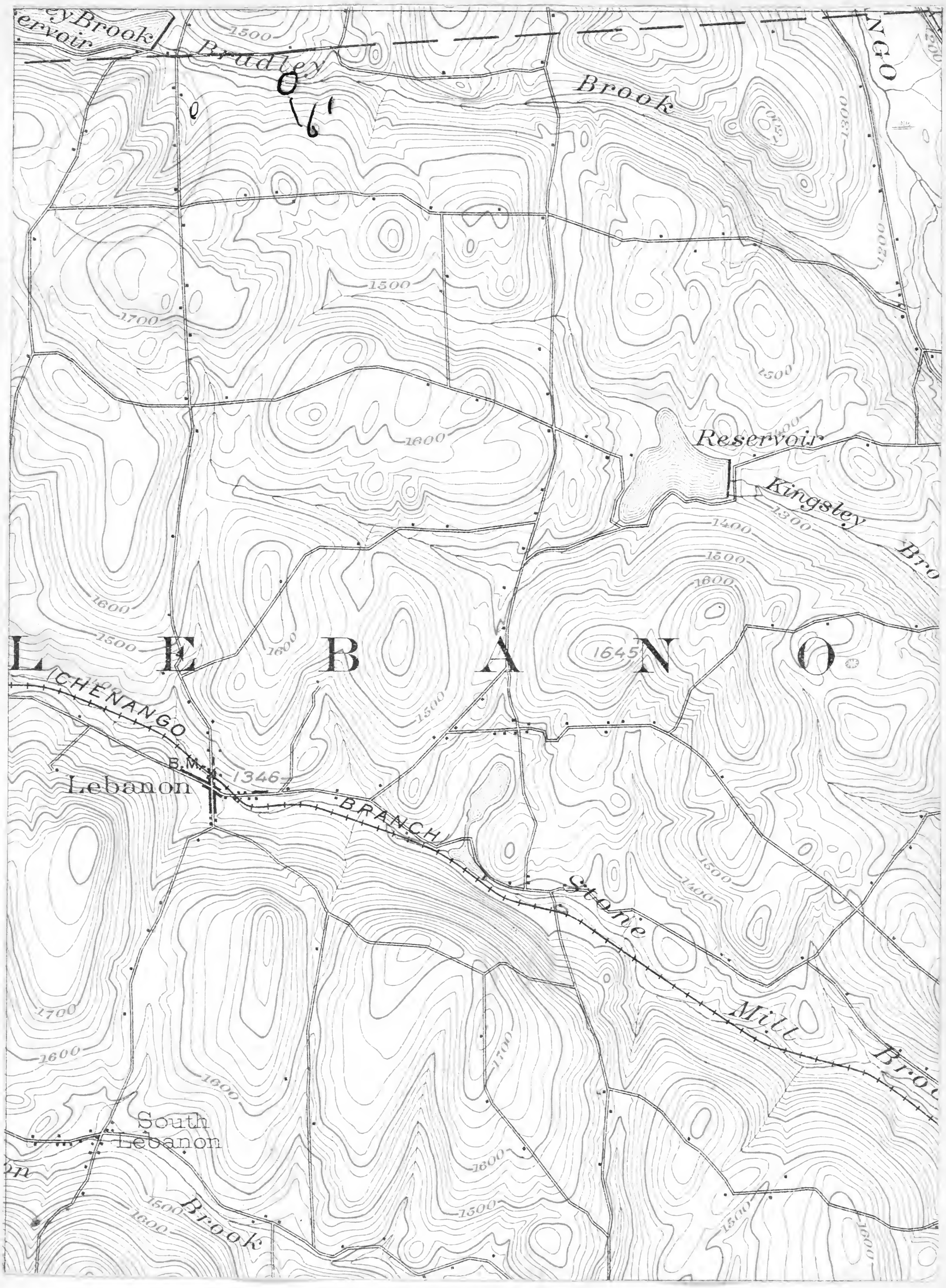
13

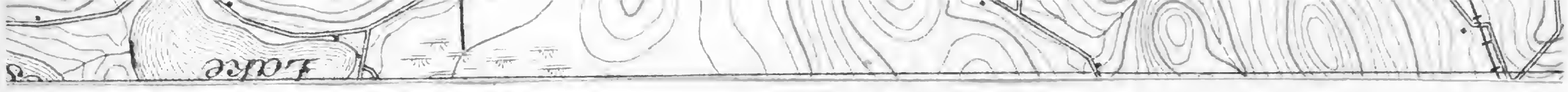
1188


Electric
Light
NELSON
Eaton
Reservoir
Eaton
Hatch
1468
1800
1700
1600
1500
51
52
53
5
Dimos

LC

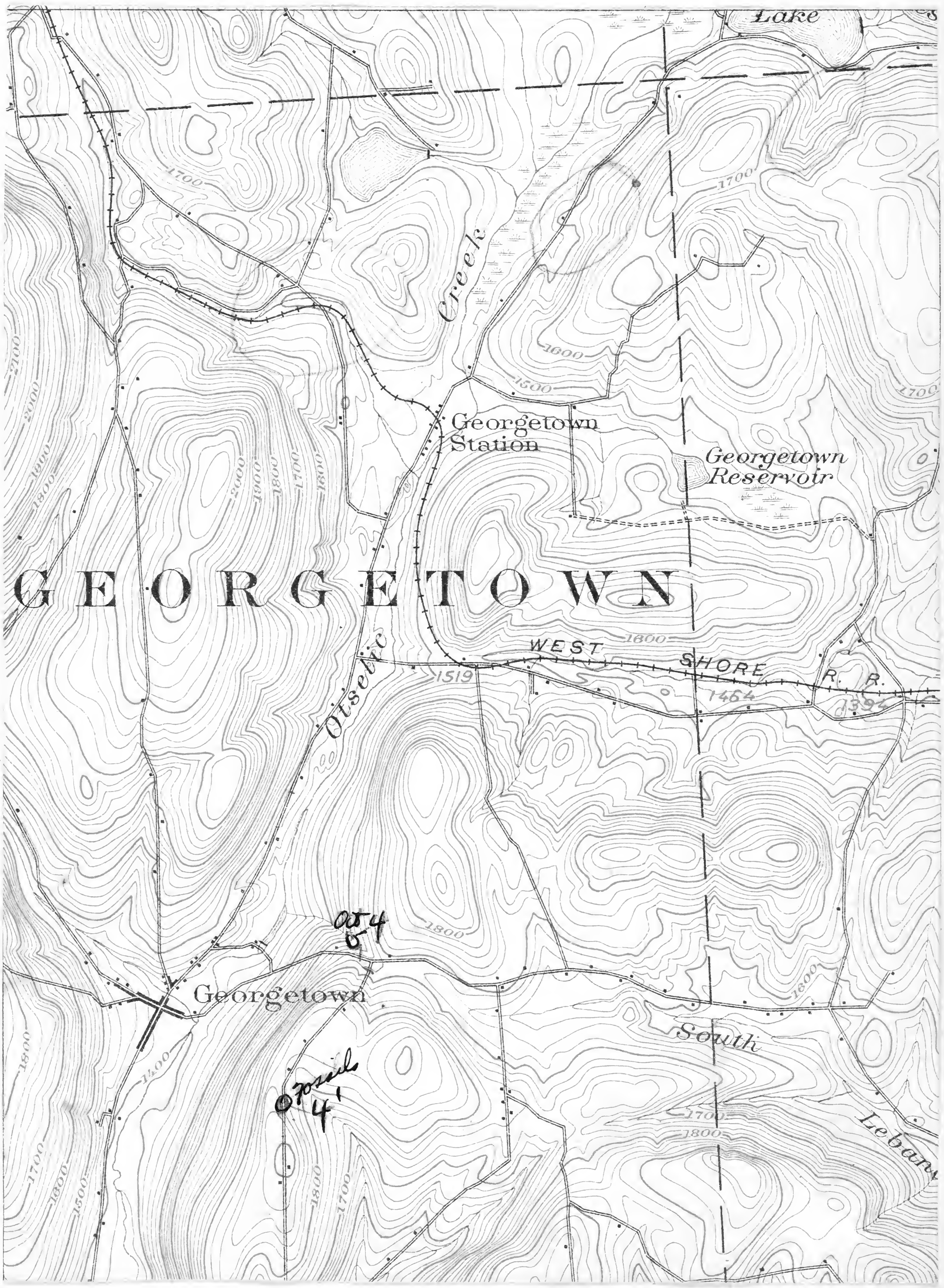

Hamilton
B.M.
1126
Dayne
Mud Pond
1124
Randallsville
HAMILTON
1582
Poolville
Sangerfield River
Earlville Lake
1081
CHENANGO CANAL
RIVER
1530
1087
D. L. AND W. R. R.
N


Bradley
Brook
Reservoir
Kingsley
Bro
L E B A N O
CHENANGO
B.M.
1346
Lebanon
BRANCH
Stonie
Mill
Brook
South
Lebanon
Brook
1500
1600
1700
1645
1300
1400



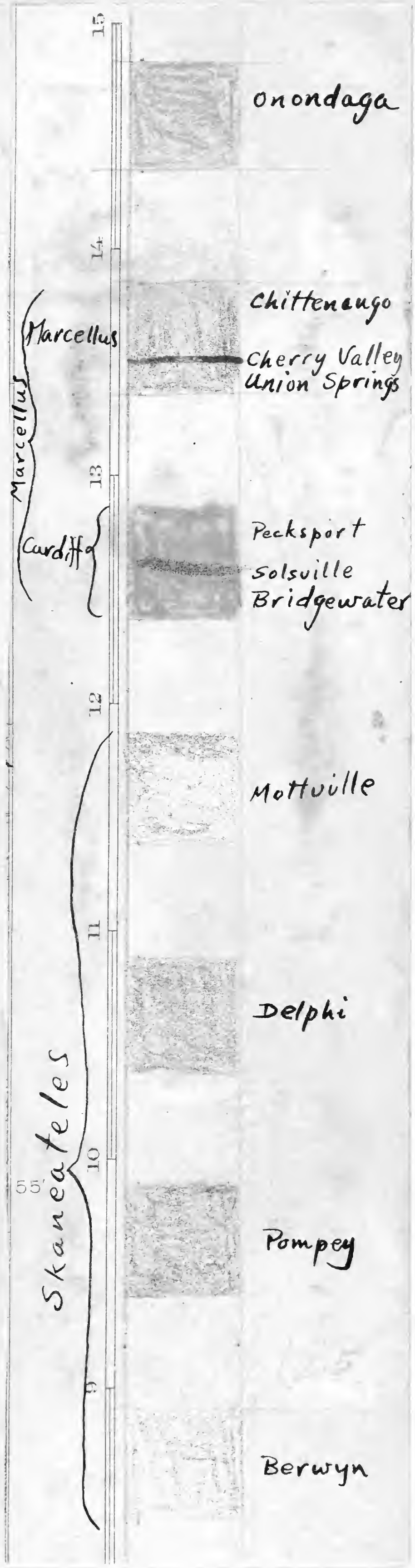
1680

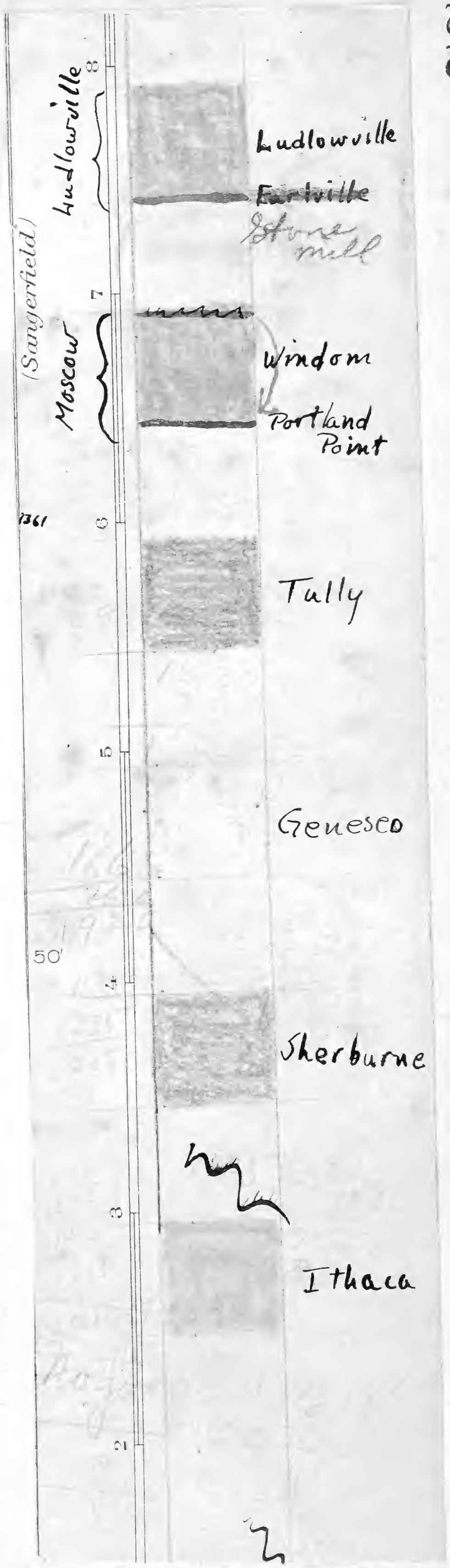
1191



1680
1620
365
455
1620
1860
1634
1680
46
1634
226
1860
1634
226
+65
0.8
48.0
1860
1680
180
1860
1572
298
1572
6
1680
1700
298
80
218

12


15
14
13
12
11
10
9
Onondaga
Chittenango
Marcellus
Cherry Valley
Union Springs
Marcellus
Pecksport
Cardiff
Solsville
Bridgewater
Mottville
Delphi
Skaneateles
55'
Pompey
Berwyn


8
7
6
5
4
3
2
1
Ludlowville
(Sangerfield)
Ludlowville
Earlville
Stone mill
Moscow
Windom
Portland Point
1361
Tully
Genesco
50'
Sherburne
Ithaca

Sept. 29 – Solsville as in 1930 was good outcrop but most nearly covered by dirt being bruished over it.

Four Woods – Pickgate – [illegible] 57 yds east of road in [illegible] of about 15'. At Solsville here is hard irregularly bedded [illegible] with some little Chonetes in all but [illegible]. Other fossils are Spirifer sp., Camarotoechia, Rhynchonella, Cyrtina, Leptostrophia, the latter is common.

Sept. 29¹ – Beautiful exposure of Solsville exposed (full section) for some distance in Page

29² – limps of Delphi – not in place

Sept. 29³ – Top of Solsville in small gully at 1332' (24 steps above 1305') at 54 steps is the top 5 or 7' of the Mottville, at 1389'. The top of the Mottville is 157' above the ~~base~~ top of the ~~Delphi~~ Solsville. The top of the Delphi is about 75 yds west on the road from the house at 1570'. Amake the top of the Delphi to be 1600'. There is also no Bloxyn in this part of the hill.

At the top of the Delphi is a layer in which Rhynchonella S. [illegible] is perhaps most abundant. Also R. [illegible] a little below – The top (about 5') is [illegible] with abundant Crystals Contains possibly Pompey

Contains E. Lucklami

294 – Delphi in and near top. To west and forming ledge of ridge is Delphi about Middle my wedge is inaccurate here for Mottville would be about 40-50' below ridge crest about 1450-60'

295 is 425 paces from V crossing, at Ias clearly Delphi. A spring 30' below the house suggests the Mottville limestone band. This would put the Mottville at 1460 or 70'. I can't tell where I am in the Delphi here.

296 – small qy. 15' high – lower Packsport
A. umbonata, S. penetens

Sept. 297 – Top of Solsville at 1445' at 18 ~~about~~ on W side road – behind W house is Packsport.

298 Small Qy in Packsport – fossils quite abundant. Large lep. L. pelmatis, Med. concentrica, Grammysia, Cucullella, Cheirotes, Phacops, Dalmanites, M. nasutilonde, P. limata, P. obsoleta, R. cyclas, S. granulosa,

299 – Roadabout Qy 298 – Packsport for at least 20 steps, top of hill in Delphi. Formerly Bembexia zone at 26 steps or 1565. The Mottville appears to be at about 1565' or at 22 steps.

2910 top of Solsville

Sept 30

1193

30 – Remeasured road section of 298 started from the top of the Solsville at the house & it took 30½ handlevel steps to the top of the Mottville which is exposed in the roadside. This 150 feet to top of the Mottville 165' is above the top of the Solsville. The contours are wrong on the handlevel so wrong. I found the top of the Mottville 25' to the top of the hill which would put it at 1580' which is probably the true elevation. From topographic etc. I would say it is about 1575'. Apparently where above it is about O.K. but the Solsville is a little too high. The fauna of the Pecksport here shows the great influx of Hamilton species.

30¹ – small exp. top of Mottville in a gully. Top of hill covered with loose Delphi pieces

30² – Solsville – whole section, exquisite exposure – fossils plentiful

Acrimacantha	L. machonalius	Lepidocoelia
Rossalatia	P. flabellum	
C. contiguus	I. peplanus	
Nucleospira	M. concentricus	

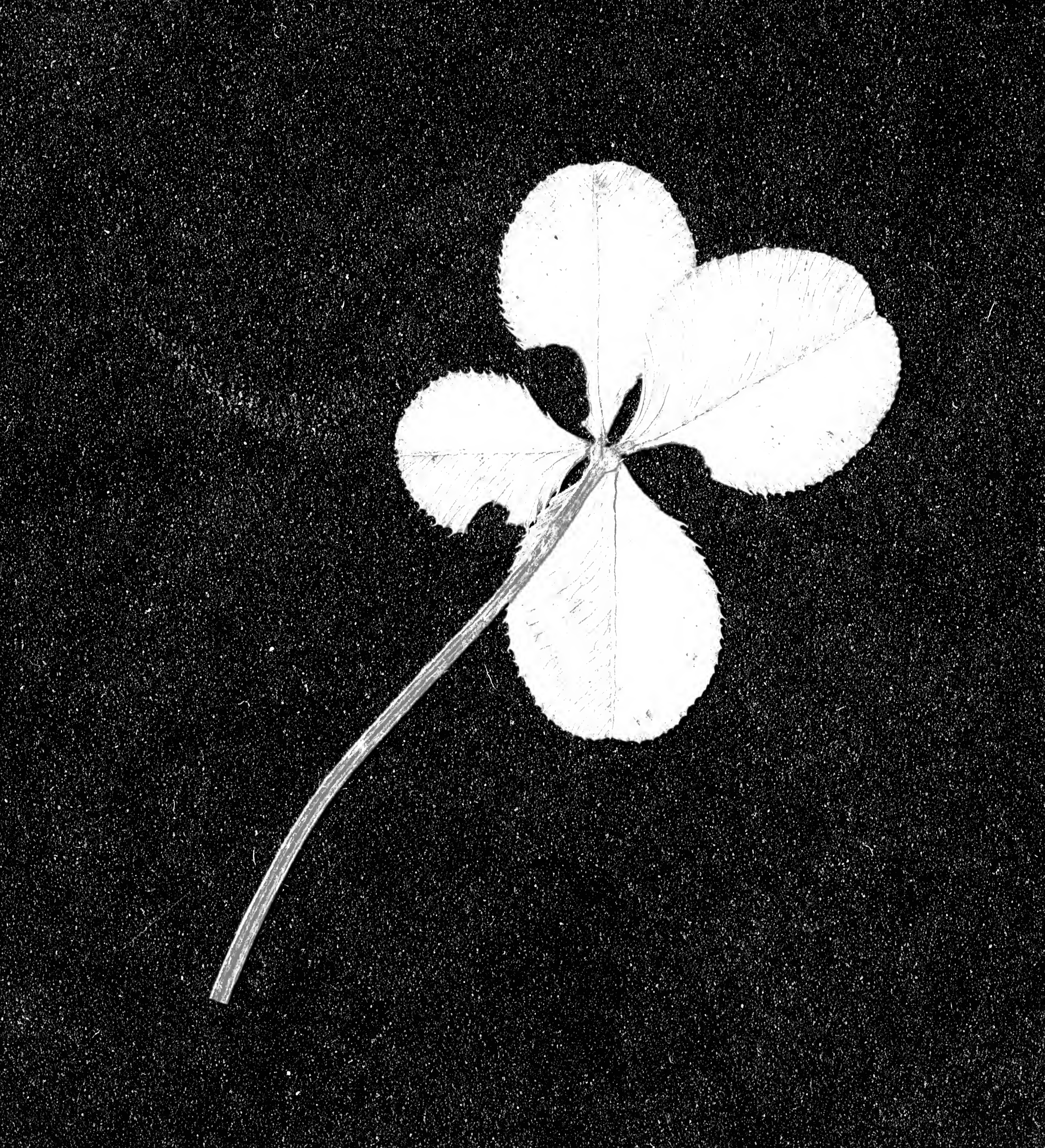
Top of Solsv. between 1600 & 1620

30³ – Ex 15-20' high in Bridgeport – 20' above quarry at 1570' in the Solsville, near the top

30⁴ Top of Solsville about 1380–1390

30⁵ Delphi – near top forms ledge of hill

47



Sept 30

1193

30 – Remeasured road section of 298 & started from the top of the Solsville at the house & it took 30½ handlevel steps to the top of the Mottville which is exposed in the roadside. This 150 makes the top of the Mottville 165' ± above the top of the Solsville. The contouring here is wrong on the hand-level as wrong. Yesterday I found the top of the Mottville 25' below the top of the hill which would put it at 1580' which is probably the true elevation. From topographic etc. I would say it is about 1575'. Apparently where I have it is about O.K. but the Solsville is a little too high. The fauna of the Pecksport here shows the great influx of Hamilton species.

30¹ – small exp. top of Mottville in a gully. Top of hill covered with loose Delphi pieces

30² – Solsville – whole section, exquisite exposure – fossils plentiful

Atrypa	Cyrtochonetes	Leptaena
Rhynchotrema	R. flabellum	
C. contrariens	L. perplana c	
Nucleospira	M. concentrica	

top of Solsv. between 1600 + 1620'

30³ – R. 15-20' high in Bridgeport – 10' above quarry at 1570' is the Solsville, near the top

30⁴ Top of Solsville about 1380-1390

30⁵ Delphi – near top forms ledge of hill

47

30⁶ - Just below house is an excellent exp. of Upper Peckaport. Mottville is probably a little below house say at 1400'

1194

30⁷ - Delphi (top) in woods at 1445'
30⁸ - near top of Pompey
30⁹ - Crumbly shale of top of Pompey in small gully

30¹⁰ Coarse shale with S. permatus, M. subdelta, Nucellas - probably both Pompey but can't place it otherwise & didn't remember S. permatus in the lower Pompey.

Oct. 1

Oct. 1 - Top of Mottville in gully is 0.3 mi. N of road intersection, by H.L. Dol. Make it at 1366'.

1² - Solsville - top 16 H.L. steps above road or at 1267'. Forms a prominent ledge.
G. triquetra, P. linata, Spirifer

1³ - Smoke top of Mottville on hill at Peckaport 1280' P. about 130' above house at intersection.

Oct 2.

2-Top of Mottville at 1408' in small gully

1195

2' - Delphi forms the bed of the road on the little rise 0.2 miles from intersection

2² - Very top of Delphi at 1508'

2³ - 15' Quarry in Peckaport - my map is wrong here

2⁴ - I make top of Delphi to be 1465 - 25 steps from top to the road. Handlevelling from the top down gave between 1480 & 1490 The top is probably at about 1480'

2⁵ - Very top of Delphi at about 1500'

2⁶ - 1430' Delphi, near Middle

2⁷ - below dam & on shore of pond Mottville is exposed - The Delphi are 0.2 mi N of corners at Morrisville & ~~0.2~~ m 0.35 miles S of corner opposite 2⁶. The Mottville is at about 1340-1350' Old Parker House now called Westendorf Hotel

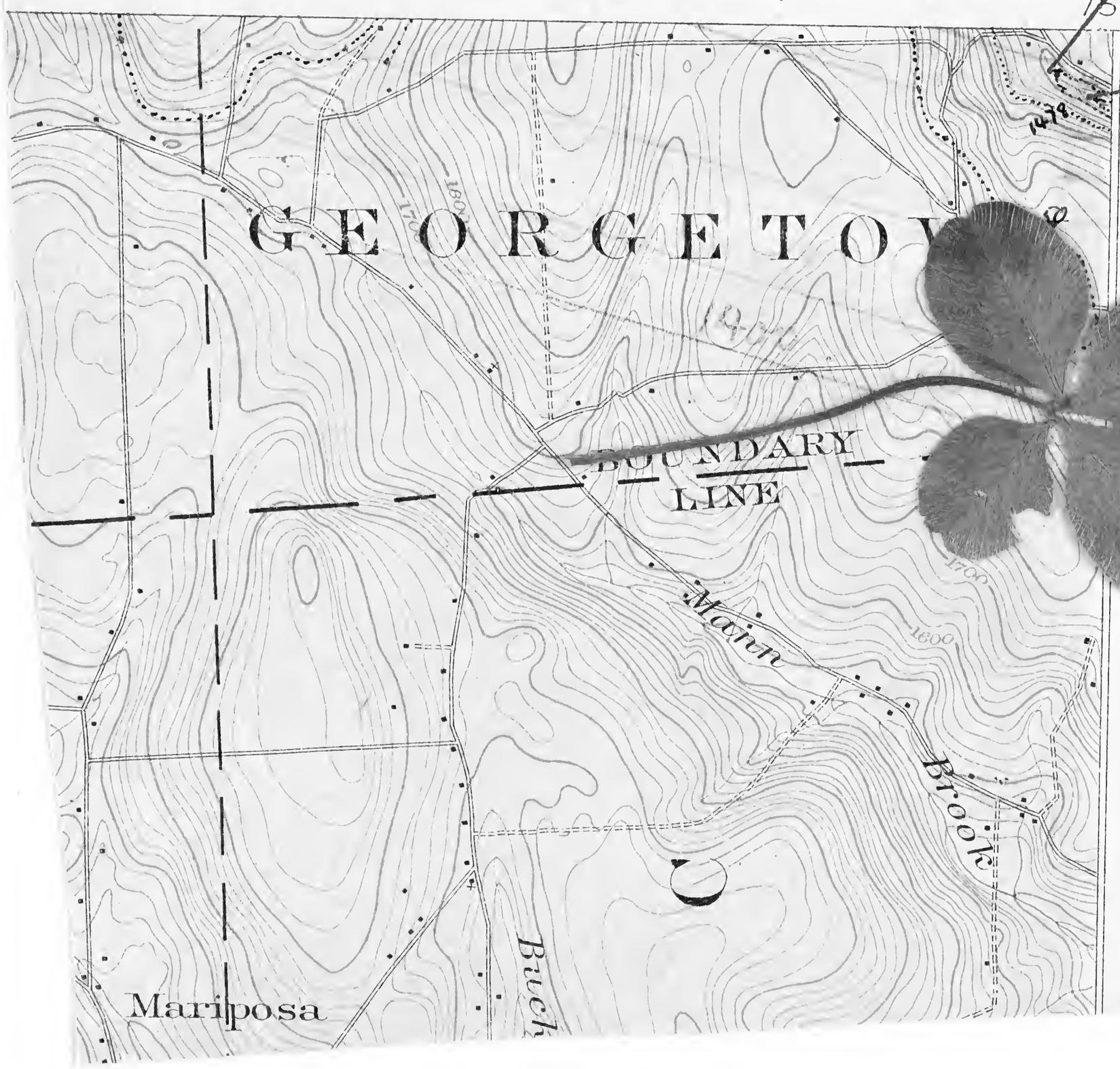
11962

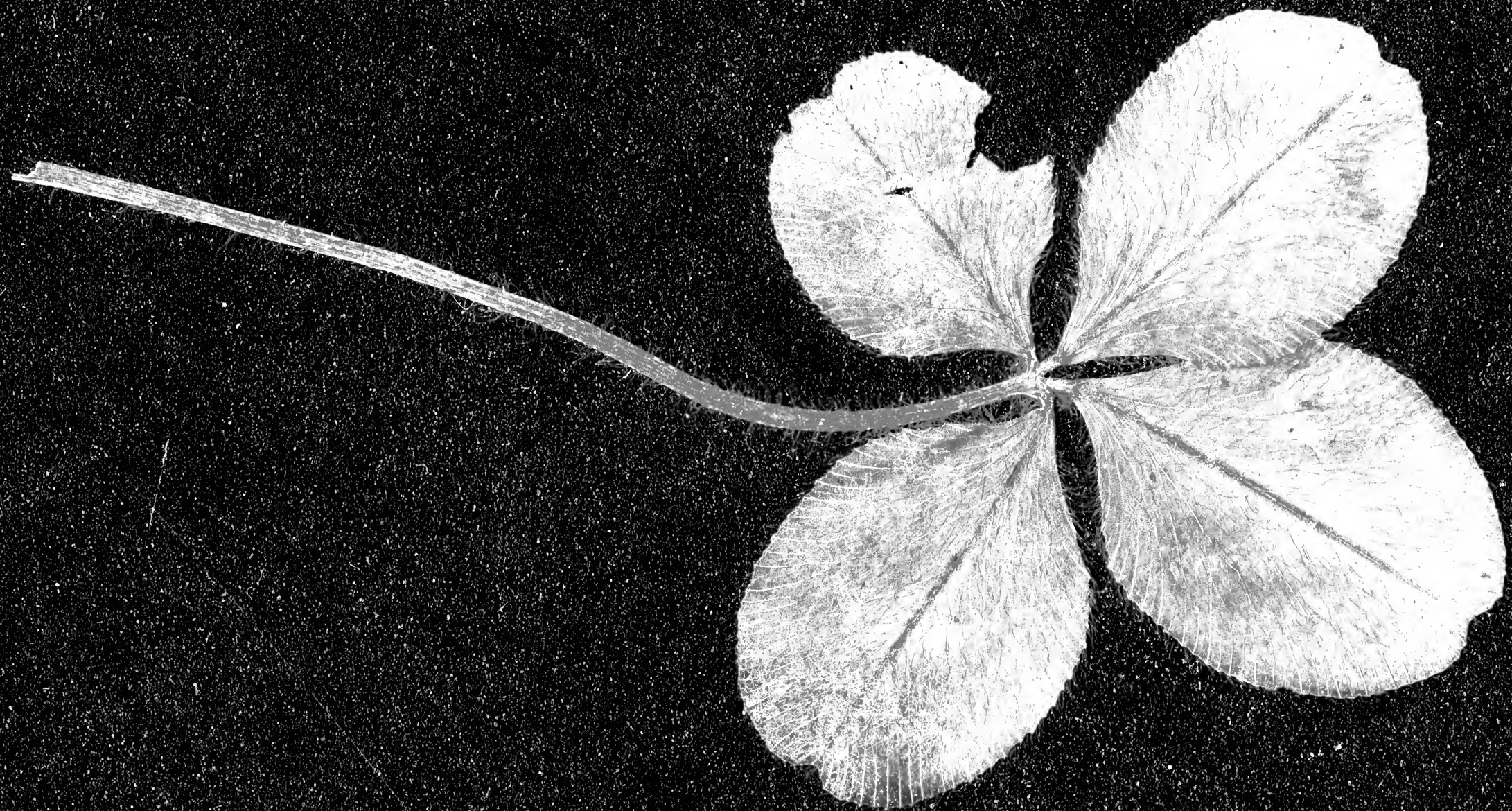
+ 1380
90'
8
1478 – Zully

Genessee
1495'-98' (?)
(Morrisville)

Base J Zully
1478'

NEW YORK
PITCHER QUADRANGLE





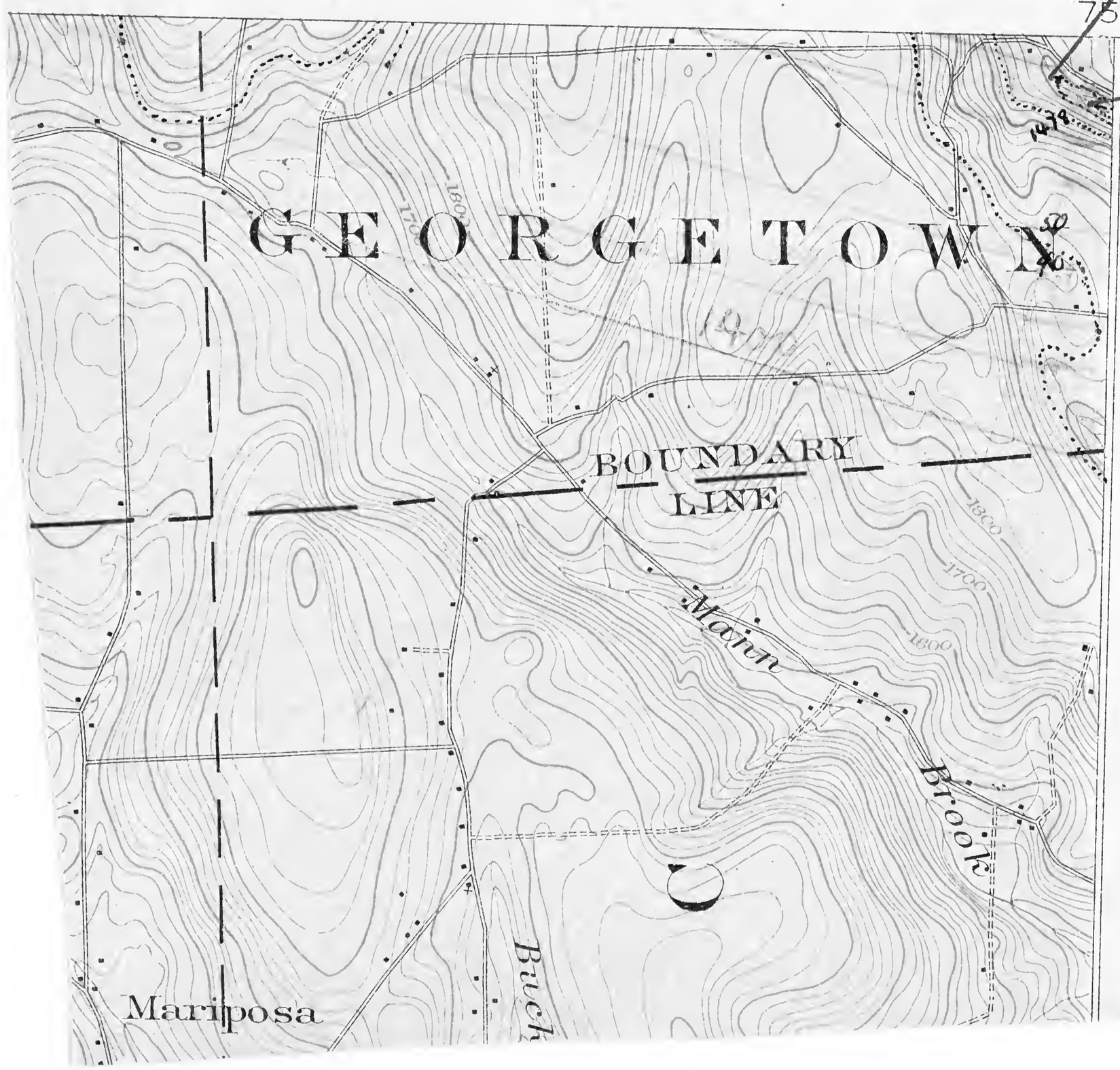
11962

+ 1380
90'
8
1478 – Zully

Genessee
1495'-98' (?)
(Morrisville)

Base of Zully
1478'

NEW YORK
PITCHER QUADRANGLE



October 3.

1196

3 - about 8 or 10' of argillaceous ss containing Camarotoechia & P. flabellum. Probably Upper Colgate. The ls should probably bring a little S. of the road.

3' - lower Ludlowville

3² - Earlville ls. - in place behind 1st house from corner at 1180 - 1190' means the latter - small gorge of Ludlowville upstream - many blocks. A town about of the ls. showing it nearly in place - is in place just behind the house.

W. Griffith Pohlmann
Merrill & Ingham

October 4th — Smale the Dully here 19'3" thick. There is a noticeable dip to the S. 2½' from the top of the Dully. 197
the Platyceras bed which is 4-6" thick here. Beneath that comes 6" (visible) of blue sh. I think this is clearly sh because where unweathered has crals in it pressing line. The shale is not very hard when fresh in the stream. Not possible to get a bed by bed section. Top of Dully must be 1620 + 1630. Genesee Tillfoot contact about 15' above rd. intersection

4' Small path in road of fossiliferous light gray, unevenly bedded argillaceous shale. Contains Leptaena, Spirifer Chonetes. 1860'

Muller Brook

On Muller Brook the thickness + sequence of the Dully are the same as at Weyers. The shale bed is 1' thick and the Platyceras zone 4-6" On the upper surf beds shell crals + Phacops appear to be the only fossils

Measured the Dully here at 19'6" and the base of the Platyceras is 3' below the top of the Dully

October 5

1198

5 – Lower Moscow about 60' below top hill. P.P. somewhere about 1700-1710

5¹ – Look for Earlville ls – lower rock in this gully is dark and fine shale with L. Hamfa, Camarotoechia & Lamellibrachiopoda. Upstream there is heavy bedded p.p. shale as below. I am convinced that it is all Ludlowville

5² – Appears to be same as in 5¹ probably Ludlowville – might be Benson

5³ – Rock that looks like Benson.

Bliss Qy. is 2.6 miles N of Morrisville

October 6

Opposite side make the base of P.P. on Sengstfrom West Extreme is 19 hundred steps above base and at about 1603'. The P.P. is dale. no ore. alternating for about 7'. Depression no abundant. It was off run from lime on hill to P.P. + 0.75 miles from mept rd. intersection. The Alleged feds of the Upper Lisbonville are 25-30' below the P.P.

David Pease Farm — Lin Bradley Brook Creek 1000 paces from Pease Dam is a South Berryn. Stands low in mean 14 20' — There is no Red Gate Slate but the bo. is clearly over within two feet of the Colgate no.

1199

57

Meet Woodruff - Friday 12 A.M.

October 8

1200

[illegible] along [illegible] road [illegible] from [illegible] There are about 80' of Delphi. The exposure is at intervals [illegible] but poor quality at the top of the Delphi. [illegible] the top of the [illegible] 1705'. The Mottville happens to be at the [illegible] at about 1610-1650'. The Delphi is exposed for 0.3 mile S down road to south.

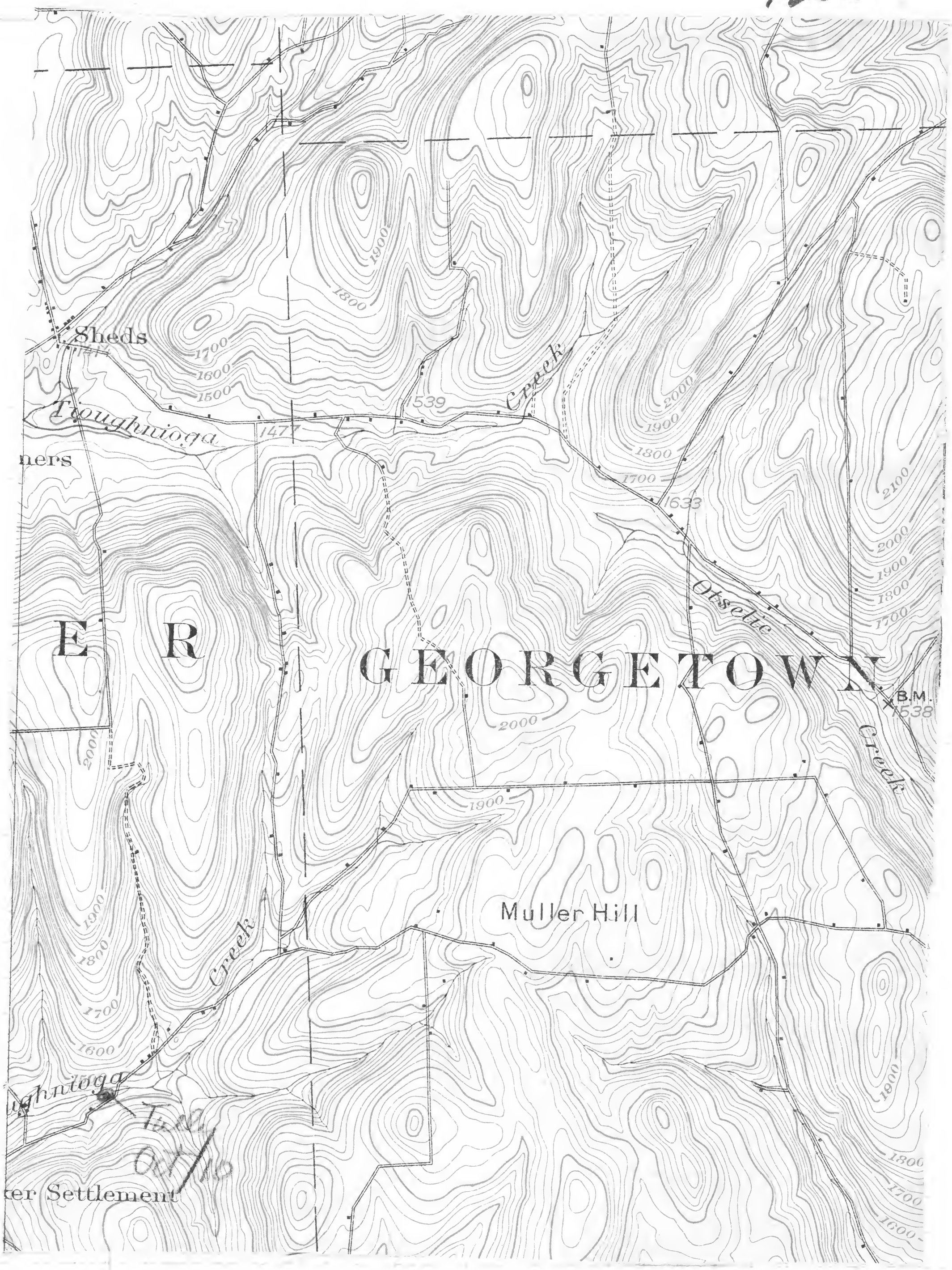
Oct 9

Upper top of Delphi 300 paces E of street after fording. At Oct 8 revisited Mottville outcrop on road at about 1610-1615 at first bend (south-W). The Delphi is evidently fully exposed in the gully Mottville at about 1600' and is well exposed.

At Red Lake the base of the Earlville ls. is irregular suggesting unconformity. At the falls the ls. is 2½' thick. Corals worn at Bradley Brook, suggesting rolling.

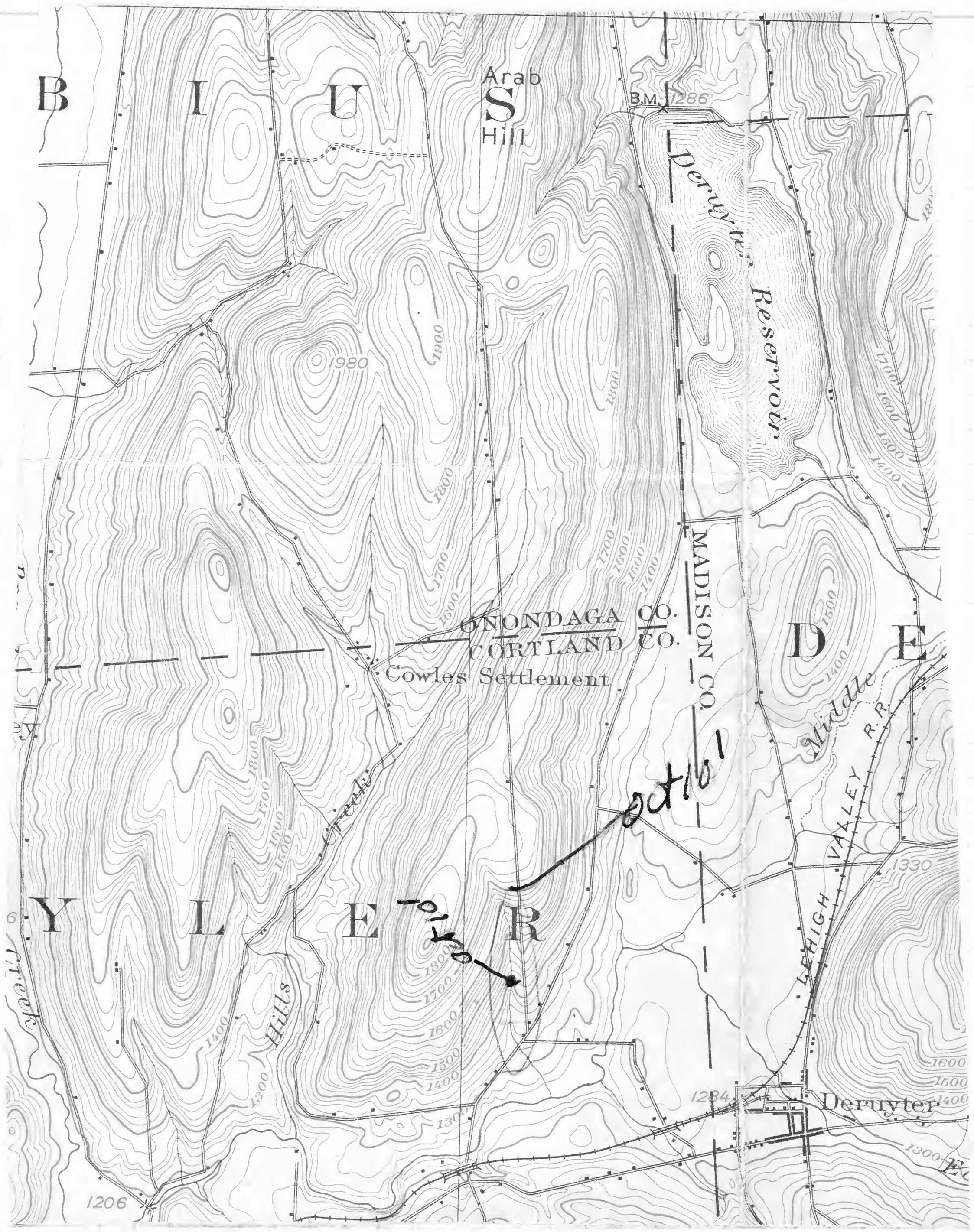
1931

1200a


Sheds
Troughnioga
Creek
1539
1477
1633
Otsego
E R
GEORGETOWN
B.M.
1538
Creek
Muller Hill
Creek
ughnioga
ter Settlement

1931

1200b


B I U
Arab
S
Hill
B.M. 1286
Deruyter Reservoir
1980
1900
1800
1700
1600
1500
1400
1300
1330
1284
1206
ONONDAGA CO.
CORTLAND CO.
MADISON CO.
Cowles Settlement
Cowles Creek
Hills
Y L E R
D E
Middle
LEHIGH VALLEY R.R.
Deruyter
E
Sp. Ft.
6
ed 101
ed 100

Oct 10.

1201

2nd navigated — the exposure here of about 45' of sandy rock is definitely the upper part of the Delphi. On the lateral gully there is Berwyn all the way

Oct. 10

Gully at Berwyn — basal bed lithologically like Hyp. bed, below are some galaxesyffs shales, possibly a foot not belonging to Hamilton base of Gully about 1450'.

Oct 10'

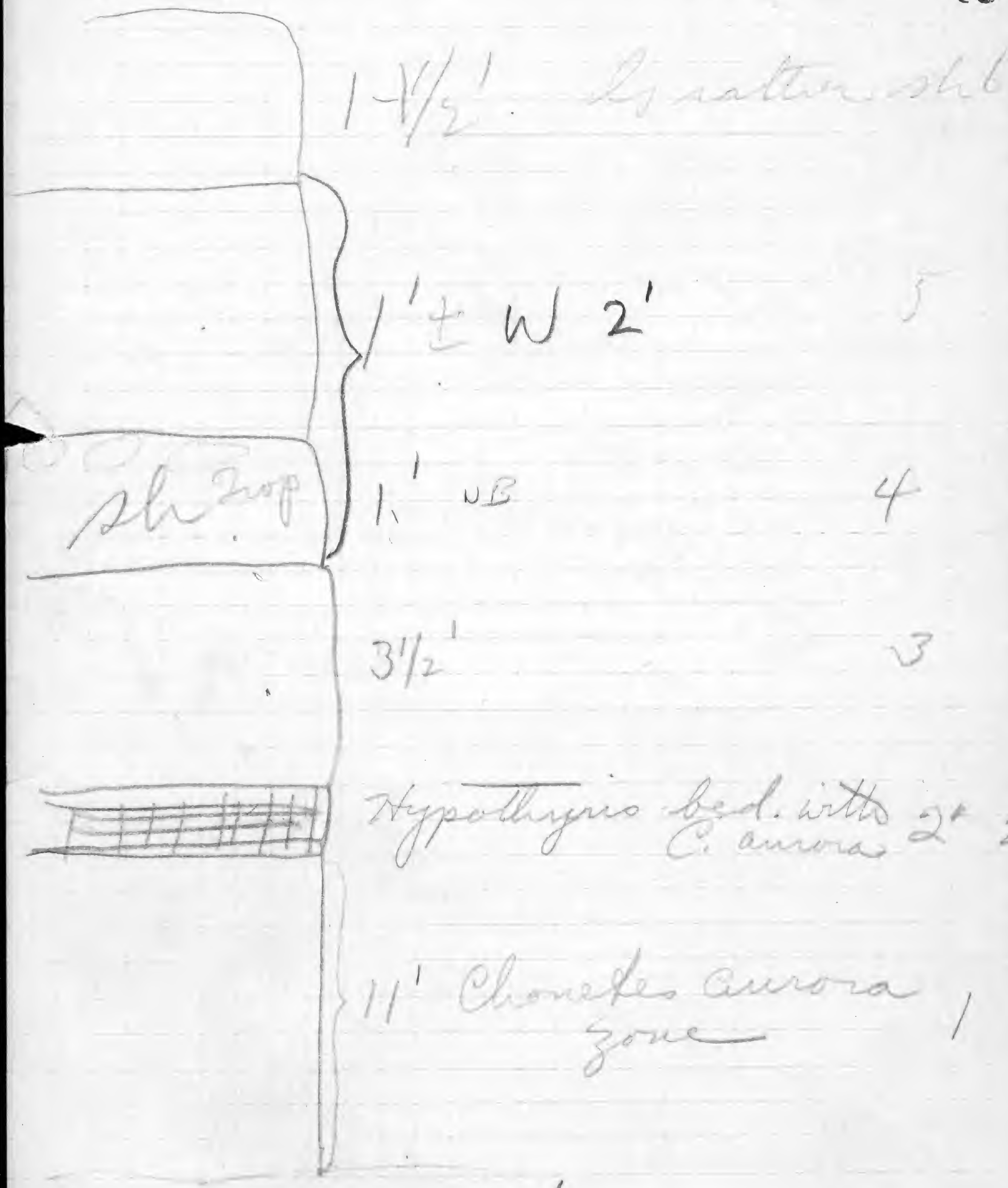
Lowest part of Gully at —

Glen 1½ miles NW of Deruyter

Over for section

Genesee Oct 10'

1201a



Covered

1 — Shaly lg. fracturing like sh
thin bedded, fucoids abundant in
C. aurora

1202

2 — Yellowish gray bed — hard sandy
micaceous 1½' layers one nodular
layer 1' thick — gr. yellow layer 1'
stiff — Lower layer has C.
R. cubitus, Schuchertella, Tornquinia,
C. aurora, Glyphorhynchus, small Spirifer
Upper bed has C. aurora

3 — About 3½' of nodular lg. Dip to
4 thin bedded shaly lg. alternating
in small ceroids. Appears at layer
rather massive nodular.

4 — About 1' shaly lg. with many
fossils — ~~has a very large~~
~~fossil, other bed of work of~~
~~Grand nodular lg. abounding in~~
Isogiodolepterus

5 — 1' shaly lg. with C. aurora
= West Brook sh.

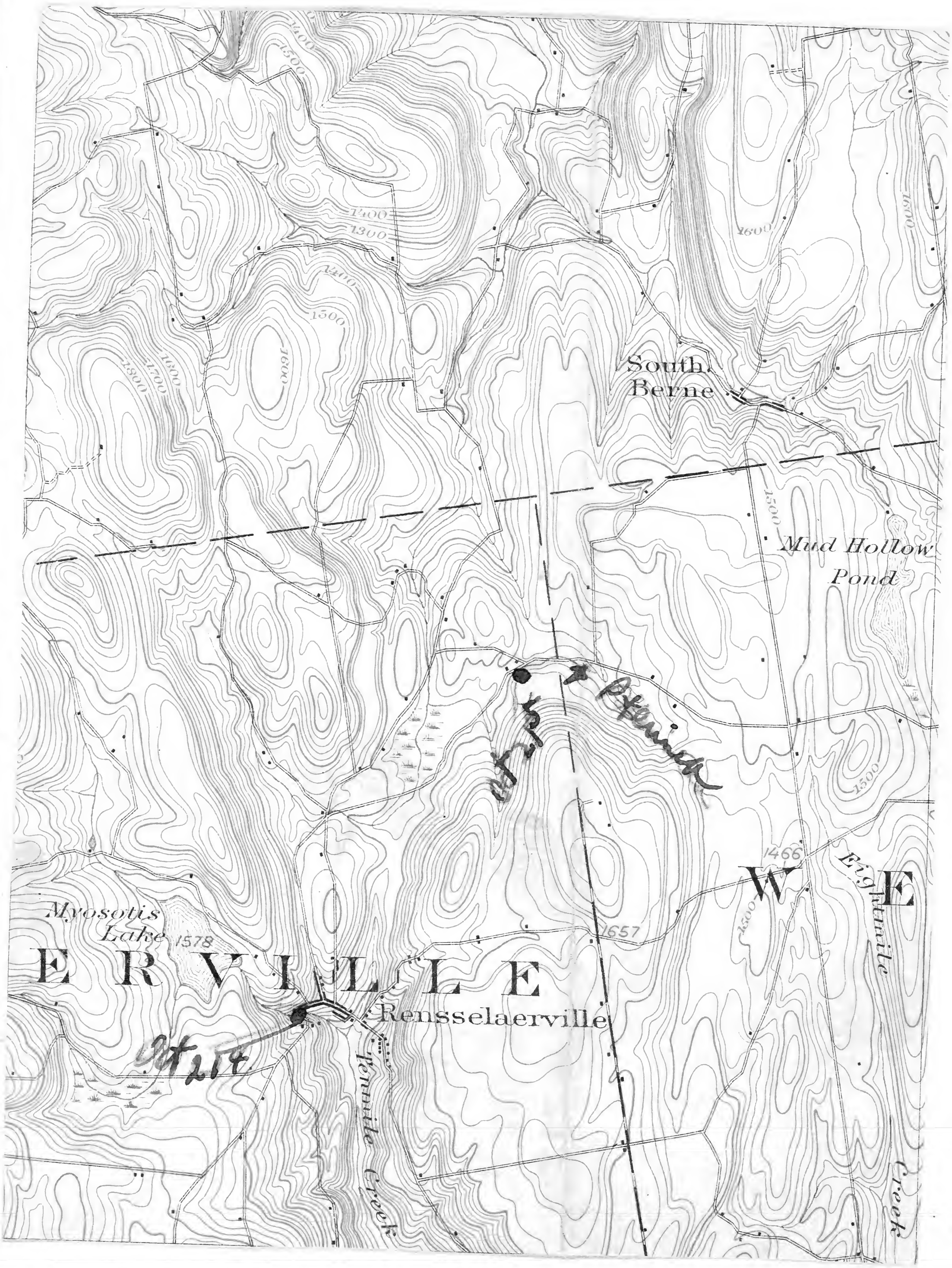
6 — 1-1½' shaly lg. more massive
small ceroids + Phacops

October 15.

1203

West Brook — The top of the second falls & calcareous bank do. 4 H.L. steps above the Platyceras bed. There are about 9½ H.L. steps to the first unquestionable Shelburne. Peculiar impressions on surface of slabs by a. are worm-burrows according to Ek

1203a


South Berne
Mud Hollow Pond
Myosotis Lake
1578
1657
1466
W
E
Rensselaerville
Eightmile Creek
1400
1300
1500
1600
1700
1800
1900

Oct 21[3]

Black shale, very sandy, fracturing in irregular flags; fossils abundant of few kinds. Fossils in layers forming stem living fronds.
Fossils

Schizophoria sp. r.
Bordophora 2 sp.
S. penkatizes a
C. Coronatus a
S. circularis rc
Nucula varicosa c
D. alveata
Glyptodesma sp.

Oct. 21[4]

Rensselaerville — upstream from bridge 1405'-1415' is said to be Hamilton, the 65' of green shales — 1st heavy red beds begin Onondaga

Hamilton fossils —
Dimorphon c
L. undergrata
P. Rhetelliana.

October 21

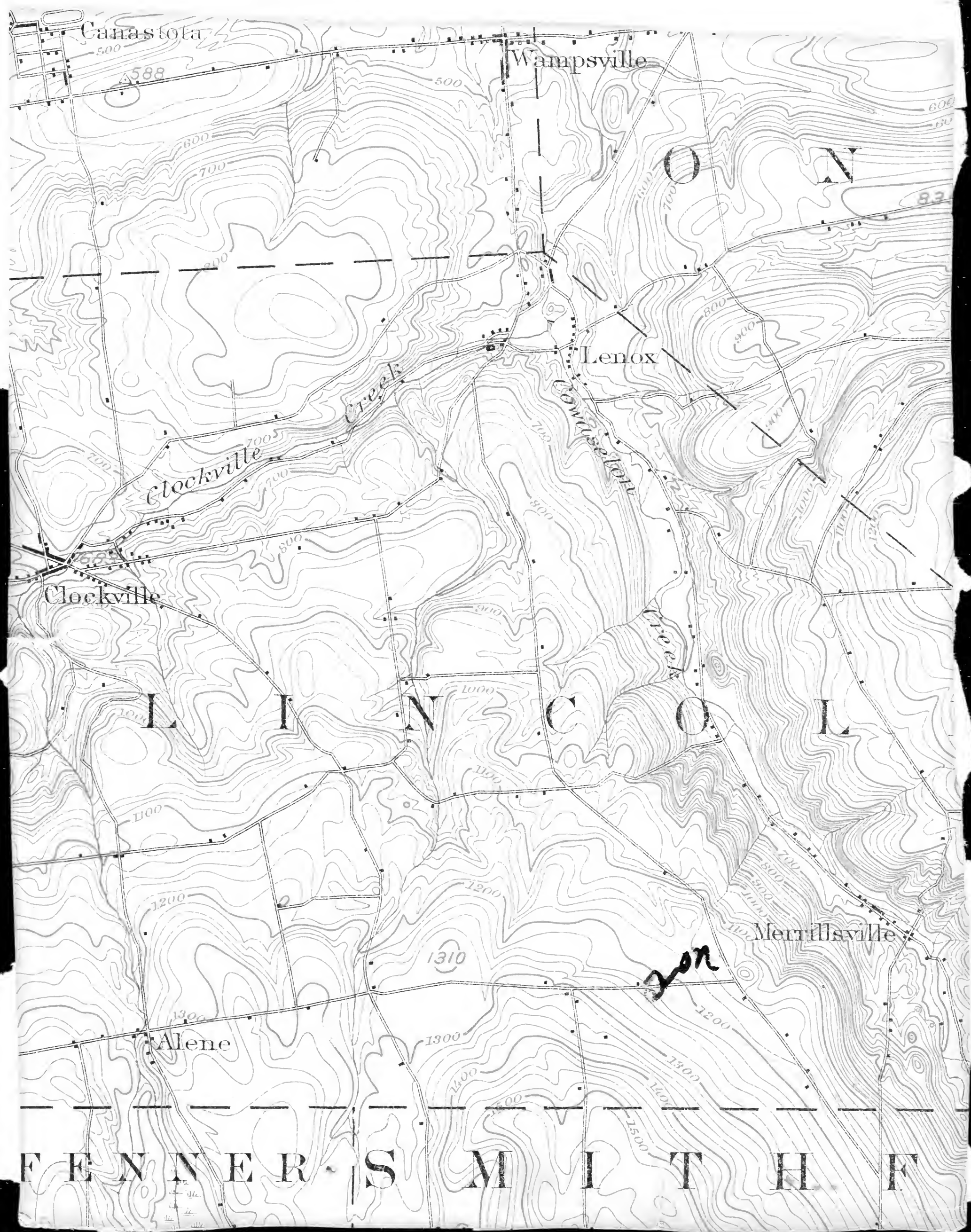
New Scotland town — at road intersection is the Onondaga and Hamilton running up Pinnacle hill nearly to top. The Marcellus is a black shale with brownish-white streaks, breaking into lumps, not unlike chips as at Oneida Creek. The shale is fossiliferous unlike the Chittenango shale elsewhere. The

Marcellus clearly represents the black shale passing over to a Hamilton facies toward the east. The fossils are chiefly small.

The Marcellus ends with the influx of the first "blocky" beds about 200' above the top of the Onondaga. Here also are sandy beds forming a flat. All of these shales & sands including the Marcellus look like the Cardiff of the Unionville region.

All of the Hamilton of the Berne region appeared to me to be of Cardiff age having a Marcellus facies.

1204a


Canastota
Wampsville
O N
Lenox
Clockville Creek
Cowaselon Creek
Clockville
L I N C O L
Merrillsville
Alene
F E N N E R S M I T H F